



FACULTY OF ANIMAL SCIENCE UNIVERSITAS GADJAH MADA YOGYAKARTA

ACADEMIC GUIDEBOOK CURRICULUM 2021

**STUDY PROGRAM OF
ANIMAL SCIENCE AND INDUSTRY**

**2023
EDITION**



TABLE OF CONTENT

| | |
|---|------------|
| REMARKS FROM THE DEAN | iii |
| INTRODUCTION | 1 |
| A. Address | 1 |
| B. History | 1 |
| C. Vision..... | 2 |
| D. Mission..... | 2 |
| E. Quality Policy | 2 |
| F. Quality Target..... | 3 |
| G. Graduate Profile..... | 3 |
| H. Study Program Objectives..... | 5 |
| I. Learning Outcomes | 5 |
| ORGANIZATION STRUCTURE..... | 9 |
| A. Academic Element | 10 |
| B. Academic Administration Managers..... | 17 |
| C. Supporting Units..... | 19 |
| IMPLEMENTATION OF EDUCATION..... | 23 |
| A. Education Program..... | 23 |
| B. Educational Activities | 23 |
| C. The Study Result Evaluation. | 30 |
| D. Study leave..... | 33 |
| E. Sanction for Student Violation..... | 33 |
| EXTRACURRICULAR ACTIVITIES | 35 |
| A. Reasoning and Creativities. | 35 |
| B. The talent and passion..... | 35 |
| C. Social service activities..... | 35 |
| D. Religious activities..... | 35 |
| STUDENT ORGANIZATION AND PARENTS ASSOCIATION (POTMA) | 37 |
| A. Student Organization..... | 37 |
| B. Student Parents Association (POTMA)..... | 37 |
| COURSE SYLLABUS | 39 |
| A. Compulsory Courses..... | 39 |
| B. Elective Courses | 47 |
| Appendix | 59 |
| Lecturer's Profile | 69 |
| Guest Lecturers | 80 |



REMARKS FROM THE DEAN

Every person, organization or institution expects success for what they have dreamed of. There are several factors that determine success, and one of them is the importance of planning. A student certainly desires success in his studies, which in this case can be seen from the punctuality of his studies and his achievements. Therefore, every student must plan their study program since entering the first year of study at the university so that they can obtain learning achievements on time.

This Academic Guidebook for the Faculty of Animal Science, Universitas Gadjah Mada is published and distributed to students to be read, studied, and understood in order to carry out studies smoothly without obstacles due to lack of information. This book contains information about the history, the Faculty vision of missions, quality policy and target, educational goals, and expected graduate's competencies. In addition, we also elaborate the academic regulations, the organization structure of the academic administrators, study evaluation, course syllabus, teaching staffs, extracurricular and students' activities, and other relevant academic information. This book is not only important for students, but also must be read by the teaching and supporting staff to smoothen the implementation of academic activities in the Faculty of Animal Science UGM.

Students are also suggested to not only read the Faculty's Academic Guidebook but also read the University's Guidebook that contains the whole general information about UGM. Students also have to follow other important and useful information, which is usually announced incidentally, either through pamphlets posted on the announcement board or in the Faculty's website. The Leaders of the Faculty also welcome students if they need to have a discussion on academic or non-academic matters. It is better to have regular consultation with an academic supervisor to solve the problem quickly. Academic information can be assessed on the website www.fapet.ugm.ac.id.

This Academic Guidebook Year 2022 is a guidance or direction of the implementation of learning and teaching activities referring to the Curriculum 2021, which contains curriculum revision to adapt with the new Government Policy Merdeka Belajar Kampus Merdeka. This curriculum provides a directed liberty for students to take academic activities outside the campus, in which the credits obtained are recognized as per the rules applied.

We expect that this Academic Guidebook can be beneficial for the readers especially students and new students to succeed in carrying out the learning activities in the Faculty of Animal Science UGM with a proud achievement through better and smart learning plan.

Yogyakarta, March 2023

Dean

Prof. Ir. Budi Guntoro, S.Pt., M.Sc., Ph.D., IPU, ASEAN Eng.



INTRODUCTION

A. Address

Address : Jl. Fauna 3, Kampus UGM, Bulaksumur, Yogyakarta – 55281, Indonesia
Phone : (0274) 513363
Facsimile : (0274) 521578
E-mail : fapet@ugm.ac.id
Website : <http://www.fapet.ugm.ac.id>

B. History

The Faculty of Animal Science is the youngest faculty at Universitas Gadjah Mada (UGM). On September 15, 1955, Faculty of Veterinary Medicine UGM was developed into the Faculty of Veterinary Medicine and Animal Science (FKH & P) UGM and furthermore by the encouragement of the community and initiative some lecturers in 1964, two departments was established: 1) Department of Veterinary Medicine and 2) Department of Animal Science.

According to Decree of Deputy Minister of Higher Education dated June 20, 1966 number 38, starting from September 1, 1966 FKH & P was divided into two faculties: 1) Faculty of Veterinary Medicine and 2) Faculty of Animal Science, but the implementation is still incorporated in FKH & P. Starting November 10, 1969 with the Decree of the Minister of Education and Culture dated November 2, 1969, Number: 1449/KT/I/SP/1969, Faculty of Animal Science UGM was officially established with the appointment of a Dean and Secretary of the Faculty of Animal Science UGM by organizing the Animal Science Study Program. From this date, the number of faculties at UGM was 18.

Following the Decree of the Director General of Higher Education No. 221/DIKTI/Kep/96 dated July 11, 1996, Animal Science Study Program was developed into four majors; Animal Nutrition and Feed, Animal Production, Livestock Social-Economics, and Animal Products Technology.

In order to develop an education system that is able to provide knowledge, professionalism and to accommodate the development of the livestock industry, based on the Decree of the Rector of UGM Number 187/P/SK/HT/2006 dated May 1, 2006, the Department of Animal Nutrition and Feed, Animal Production, Livestock Social-Economics, and Animal Products Technology are converted into Study Program of Animal Science and Industry.

Furthermore, based on the Decree of the Rector of UGM Number 1612/P/SK/HT/2015, in 2016, department reorganization was carried out with reference to the University's Organizational Structure developed into five departments: Department of Animal Feed and Nutrition, Department of Animal Production, Department of Animal Breeding and Reproduction, Department of Livestock Social Economics, and Department of Animal Products Technology.

C. Vision

The vision of the Study Program of Bachelor in Animal Science and Industry is to organize a superior, independent, and dignified animal science and industry education, internationally standardized and inspired with Pancasila spirit by prioritizing the interests and prosperity of the Indonesian nation.

D. Mission

The missions of the Study Program of Bachelor in Animal Science and Industry, Faculty of Animal Science UGM are:

1. To conduct an internationally qualified education in animal science and industry, producing graduates with high moral integrity and knowledge involved in nation building and development of the country.
2. To conduct research utilizing local excellence and expertise in order to develop science and technology in animal science.
3. To provide community services and to develop innovations needed by the community.
4. To develop organization in relation to educational activities, research, and community development through transparent, accountable, and qualified management.

E. Quality Policy

1. The Faculty of Animal Science UGM is determined to continuously improve the quality performance of teaching and learning process, through increasing relevance, innovation, efficiency, and productivity;
2. The Faculty of Animal Science UGM is determined to continuously improve service quality to stakeholders, especially services to students, to create satisfaction service;
3. The Faculty of Animal Science UGM is determined to continuously improve the competencies of teaching and supporting staffs;
4. The Faculty of Animal Science UGM is determined to continuously improve the quality of environment in campus life.

F. Quality Target

1. The implementation of research-based learning;
2. The implementation of international standard student-centered learning;
3. The implementation of local excellence-based research;
4. The establishment of an incubator for research results;
5. The implementation of research-based collaboration and community services;
6. Institution with integrated and efficient management; and
7. Improving national and international cooperation.



G. Graduate Profile

1. Professional Animal Engineer

Professional engineers are engineers who work professionally with an authority protected by the law in the scope of animal husbandry design and engineering to support a company or community in solving problems and increase their livestock business. Several professions in the animal husbandry are nutritionists, project feasibility auditors/assessors, breeding experts, biotechnology experts, Reproduction expert, Inseminator, butcher including halal butcher, and Halal Product Auditor.

2. Professional Livestock Farmer

Bachelor of Animal Science is equipped with basic competencies in the fields of biochemistry, microbiology, nutrition, feed, forage, biotechnology, production systems, genetics, breeding, reproduction, macro and micro economics, project analysis, communication, marketing, consumer behavior, food processing and technology, waste treatment, and farm, development planning. These competencies are the basis for continuing to the professional engineering level. Professionals in the livestock sector can also become livestock IT experts, data analysts, content creators, digital

marketers, trainers, extension workers, journalists/reporters and consultants in the field of animal husbandry and other fields related to animal husbandry.

3. Business Leaders

Bachelor of Animal Science can work professionally in the private sector/BUMN/BUMD, Bank, or Non-Governmental Organization (NGO). The private sector/BUMN includes livestock industry manufacturing feed, supplements, medicines, cultivation, equipment, transportation, distribution, livestock slaughter, product processing, and marketing by applying scientific competence in management, nutrition, feed, production systems, digital recording, food processing technology, logistics, distribution, livestock health, and marketing. The Banking Sector includes banks and financial institutions to support livestock business by applying competencies in basic macro and micro economics, banking, credit, financial modeling, project evaluation, financial management, and animal production system and management. Non-governmental organizations including legal aid institutions, research institutions, or community empowerment institutions related with the livestock sector. This profile places a Bachelor of Animal Science in a managerial position such as Manager, Director, or Main Director.

4. Entrepreneur

Bachelor of Animal Science can work as an entrepreneur in the livestock sector by running a business or independent enterprises engaged in livestock agribusiness both upstream to downstream businesses like provision of production inputs, production system operation, output marketing, as well as supporting fields in the livestock business. This profession is expected to implement the competencies in product marketing management, designing production operations management, marketing, agribusiness management and technical sciences such as nutrition, production systems, and technology for processing food and livestock products.

5. Researcher

Bachelor of Animal Science can work professionally by developing science through research results and creating innovations with new technologies. This profession is expected to implement research competencies in the basic animal sciences as well its development related to biochemistry and microbiology, nutrition and feed, production systems, genetics, food technology and processing, livestock social-economics, and other topics related with research methods, project analysis and research management.

6. Educator

Bachelor of Animal Science can work professionally as Educators in Middle Schools (Teacher) or Higher Education (Lecturer) or in government or private institutions (Widyaiswara). This profession develops animal sciences through education, research, and community services and can also synergize with the government and businessmen. It needs competency in the animal sciences according to curriculum guidelines designed to educate and teach the basic animal sciences, its application, and its development to students.



7. Bureaucrat

Bachelor of Animal Science can work professionally in the central government or regional government related to animal husbandry. This profession implements governance managerial skill, planning, implementation, development supervision and evaluation, and designing policies related to animal husbandry development.

H. Study Program Objectives

The aim of organizing the Study Program of Bachelor Animal Science and Industry is to generate graduates who:

1. Embody the spirit of Pancasila, norms, religion, and ethics in developing the livestock sector.
2. Master the general theoretical concepts of related knowledge and the deeper concepts of animal science, and has an innate capacity in problem solving.
3. Are able to apply the acquired animal science through research, entrepreneurship or pursue higher education.
4. Perform effective communication skills in the fields of animal science and industry by using information technology and harmonizing the gained knowledge with other sciences Learning Outcomes

I. Learning Outcomes

Attitude and Behavior

1. Being devoted to God Almighty and upholding human values in carrying out duties based on religion, morals, and ethics;
2. Contributing to improving the quality of life in the society, nation, and to the advancement of civilization based on Pancasila;



3. Respecting the diversity of cultures, views, religions, and beliefs, as well as the original opinions or findings of others to show good teamwork and having social sensitivity and concern for the community and the environment;
4. Obeying the law and discipline in social life by embodying the academic values, norms, and ethics, and showing the work responsibility in their expertise independently;
5. Embodying the spirit of independence, work ethos, struggle and entrepreneurship to demonstrate behavior in accordance with ethics;
6. Having sincerity, commitment to develop the attitudes, values, and abilities of students based on the values of local wisdom and noble character and have the motivation to act for the benefit of students and society in general;
7. Being responsible, working professionally, and having a sensibility regarding issues as well as be able to anticipate and resolve problems in accordance with laws/regulations.

Knowledge

1. Mastering the basic theoretical concepts of natural science and basic animal science;
2. Mastering the principles and solving problems in the current animal science area based on economics, social, and environment;
3. Mastering the principles and techniques of designing systems, processes, and/or components in the livestock sector;



4. Applying the engineering principles of the livestock industry from upstream to downstream by considering business optimization and the development of information technology

Special Skill

1. Able to identify, analyze, and formulate problem solving by applying the latest scientifically reliable methods and technology while maintaining academic integrity in animal science and industry;
2. Able to design, implement, and evaluate an innovative and sustainable livestock business management system by considering social, economic, cultural, and environmental considerations, especially in the tropics;
3. Able to utilize resources and planning tools and engineering analysis effectively and efficiently with a cutting-edge approach in animal science;

General Skill

1. Able to apply critical, creative, strategic, and systematic thinking independently in the context of the science and technology implementation that pay attention to and apply human values in accordance with their expertise area;
2. Able to compose a scientific description of the study results as the final task, and disseminate it through the college website;
3. Able to lead and make decisions appropriately in the context of problem solving in animal husbandry based on the results of information and data analysis;
4. Able to uphold academic integrity in general and prevent plagiarism practices;
5. Able to communicate effectively with oral and written in Indonesian and English by using information technology for scientific development and animal husbandry implementation.

**LABORATORIUM
PASCA PANEN PETERNAKAN**



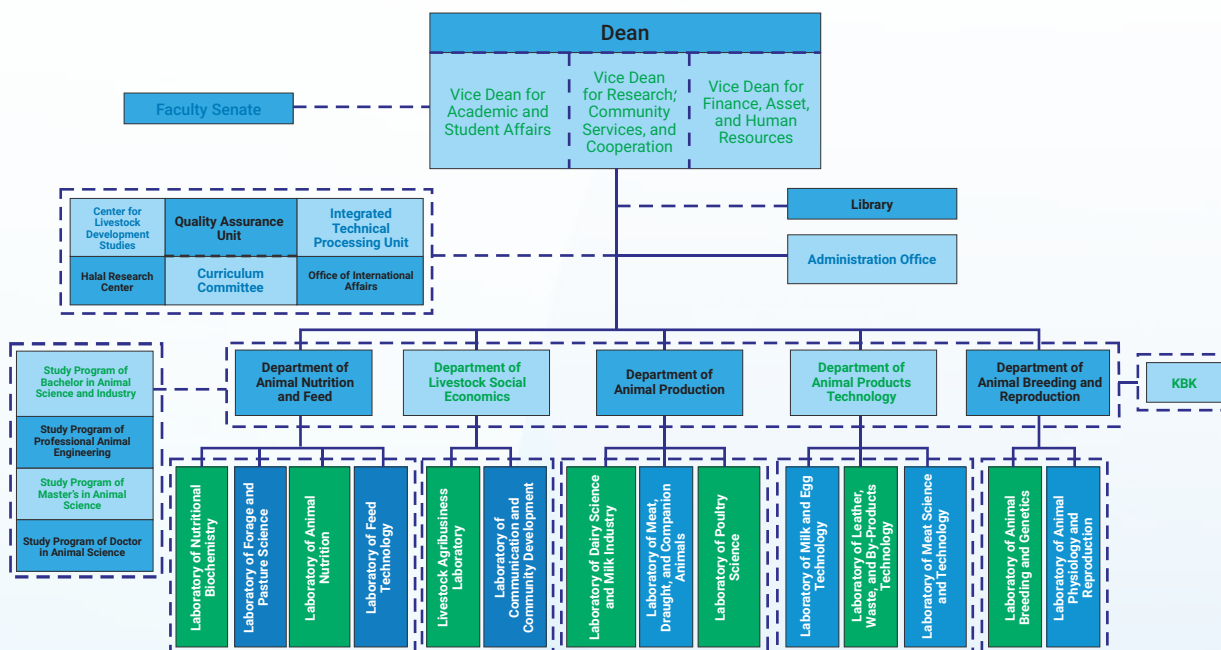
JAPFA
PT. Cemas Adisatwa



**UNIVERSITAS
GADJAH MADA**



ORGANIZATION STRUCTURE



FACULTY MANAGERS PERIOD OF 2021-2026



Prof. Ir. Budi Guntero,
S.Pt., M.Sc., Ph.D.,
IPU., ASEAN Eng.

Dean



Ir. R. Ahmad
Romadhoni Surya
Putra, S.Pt., M.Sc.,
Ph.D., IPM., ASEAN
Eng.

Vice Dean for
Academic and
Student Affairs



Ir. Andriyani Astuti,
S.Pt., M.Sc., Ph.D.,
IPM., ASEAN Eng.

Vice Dean for Finance,
Assets, and Human
Resources



Prof. Ir. Yuny Erwanto,
S.Pt., M.P., Ph.D., IPM.

Vice Dean for
Research, Community
Services, and
Cooperation

In order to facilitate the implementation of education, research and community services, the Study Program of Bachelor in Animal Science and Industry at the Faculty of Animal Science UGM is supported with an organizational structure consisting of: Faculty Leaders, Faculty Senate, Academic Executives, Administrative Executives and Supporting Elements.

The Academic Implementing Element consists of teaching staff, technicians, administration and laboratories. Laboratories in the Study Program of Bachelor in Animal Science and Industry consist of laboratories that can describe the concept of animal science, technology, industry and agribusiness.

A. Academic Element

In the academic implementation, the Vice Dean for Academic and Student Affairs is assisted by the Head and Secretary of the Study Program. The Faculty has 5 Departments in implementing academic and administrative functions. The department is the implementing element of the faculty in part or a branch of knowledge. The department consists of a group of Educators, Technicians, Administration and Laboratory. The department is led by a head of the department.



Manager of the Study Program of Bachelor in Animal Science and Industry and Departments



Ir. Tri Satya Mastuti Widi, S.Pt., M.P., M.Sc., Ph.D.,
IPM., ASEAN Eng.
Head of the Study Program of Bachelor in Animal
Science and Industry



Ir. Muhlisin, S.Pt., M.Agr., Ph.D., IPP.
Secretary of the Study Program of Bachelor in
Animal Science and Industry



Prof. Dr. Ir. Kustantinah, DEA., IPU.
Head of Department of Animal Nutrition and
Feed



Ir. Panjono, S.Pt., M.P., Ph.D., IPM., ASEAN Eng.
Head of Department of Animal Production



Prof. Ir. Tety Hartatik, S.Pt., Ph.D., IPM.
Head of Department of Animal Breeding and
Reproduction



Dr. Ir. Suci Paramitasari Syahlani, M.M., IPM.
Head of Department of Livestock Social
Economics



Ir. Rusman, M.P., Ph.D.
Head of Department of Animal Products Technology

1. Department of Animal Nutrition and Feed

The Department of Animal Nutrition and Feed is an academic implementing element at the Faculty of Animal Science that carries out education and teaching, research, and community service in branches of science related to animal husbandry, especially nutritional biology and animal feed. The main task of this Department is to develop the science of nutrition and animal feed that includes biochemistry, animal nutrition, feed composition and nutrients requirements for animals, procurement, use, preservation and animal feeding techniques, and how to prepare rations. This department has four laboratories. The following are laboratories and lecturer personnel in each laboratory at the Department of Animal Nutrition and Feed.

a. Laboratory of Nutritional Biochemistry

This laboratory is responsible for developing the field of biochemistry in microbial cells, animal cells and plant cells and their application to livestock performance in a comprehensive and sustainable manner, led by Dr. Ir. Chusnul Hanim, M.Sc., IPM., ASEAN Eng. The laboratory is equipped with units of chemical, enzyme, microbiological and molecular analysis equipment from biological preparations, feed ingredients and livestock products. Lecturer personnel at the Laboratory of Nutritional Biochemistry are:

| No | Lecturer Name | NIP/NIKA |
|----|--|-----------------------|
| 1 | Dr. Ir. Chusnul Hanim, M.Si., IPM., ASEAN Eng. | 19650316 199803 2 001 |
| 2 | Prof. Dr. Ir. Lies Mira Yusiati, SU., IPU., ASEAN Eng. | 19530623 197803 2 001 |
| 3 | Dr. Ir. Asih Kurniawati, S.Pt., M.Si., IPM. | 19710717 200012 2 001 |
| 4 | Ir. Muhlisin, S.Pt., M. Agr., Ph.D., IPP. | 19850510 201404 1 002 |
| 5 | Dr. Ir. Muhsin Al Anas, S.Pt., IPP | 111199204202011101 |
| 6 | Hendra Nur Cahyo, S.Pt., M.Sc. | 111199501202301101 |

b. Laboratory of Forage and Pasture Science

This laboratory has the responsibility of the forage, pasture, and animal nutrition disciplines. The laboratory is led by Dr. Ir. Bambang Suhartanto, DEA., IPU. The laboratory is facilitated with experimental and production gardens, collections of forages, and equipped with equipment units for measuring feed quality. Lecturers at the Laboratory of Forage and Pasture Science are:

| No | Lecturer Name | NIP/NIKA |
|----|--|-----------------------|
| 1 | Prof. Dr. Ir. Bambang Suhartanto, DEA., IPU. | 19581124 198303 1 003 |
| 2 | Ir. Bambang Suwignyo, S.Pt., M.P., Ph.D., IPM., ASEAN Eng. | 1975123 1200312 1 003 |
| 3 | Ir. Nafiatul Umami, S.Pt., M.P., Ph.D., IPM., ASEAN Eng. | 19781130 200212 2 002 |
| 4 | Nilo Suseno, S.Si., M.Si. | 19791107 200812 2 001 |
| 5 | Yogi Sidik Prasajo, S.Pt., M.Agr., Ph.D., IPP. | 111198908201802101 |
| 6 | Dr. Ir. Miftahush Shirothul Haq, S.Pt., IPP. | 111199109202011101 |

c. Laboratory of Animal Nutrition

This laboratory is responsible for developing the science of animal feed ingredients and animal nutrition, and is led by R. Edwin Indarto, S.Pt., M.P. This laboratory also conducts chemical analysis which includes chemical components of feed ingredients, minerals and energy of feed ingredients, secondary metabolite compounds, evaluation of nutrient utilization in polygastric and

monogastric livestock, and development of functional feeds. Lecturer personnel at the Laboratory Animal Nutrition are:

| No | Lecturer Name | NIP/NIKA |
|----|---|-----------------------|
| 1 | R. Edwin Indarto, S.Pt., M.P. | 19700512 199601 1 002 |
| 2 | Ir. Nanung Danar Dono, S.Pt., M.P., Ph.D., IPM., ASEAN Eng. | 19731223 199903 1 002 |
| 3 | Prof. Dr. Ir. Kustantinah, DEA., IPU. | 19581110 198403 2 001 |
| 4 | Prof. Dr. Ir. Zuprizal, DEA., IPU., ASEAN Eng. | 19590831 198503 1 001 |
| 5 | Insani Hubi Zulfa, S.Pt., M.Sc. | 111199302201706201 |
| 6 | Dr. Ir. Aji Praba Baskara, S.Pt., IPP. | 111199302202105101 |

d. Laboratory of Feed Technology

This laboratory is responsible for developing the field of animal feed and nutrition technology, and is led by Prof. Dr. Ir. Ali Agus, DAA, DEA., IPU., ASEAN Eng. This laboratory provides various equipment related to improving feed quality such as pellet machines, grinders, crushers and mixers and is equipped with a physical, chemical, biological and enzymatic feed quality control analysis unit. Lecturer personnel at the Laboratory of Feed Technology are:

| No | Lecturer Name | NIP/NIKA |
|----|--|-----------------------|
| 1 | Prof. Dr. Ir. Ali Agus, DAA, DEA., IPU., ASEAN Eng. | 19660822 199010 1 001 |
| 2 | Ir. Cuk Tri Novianti, S.Pt., M.Anim.St., Ph.D., IPM., ASEAN Eng. | 19731119 199903 1 001 |
| 3 | Ir. Andriyani Astuti, S.Pt., M.Sc., Ph.D., IPM., ASEAN Eng. | 19760423 200501 2 002 |
| 4 | Ir. Dimas Hand Vidya Paradhipta, S.Pt., M.Sc., Ph.D., IPP. | 111199107201811103 |
| 5 | Moh. Sofi'ul Anam, S.Pt., M.Sc | 111199404202201101 |

2. Department of Animal Production

The Department of Animal Production is an academic implementing element that carries out education and teaching, research, and community service, which is responsible for developing science and technology related to production biology, industrial engineering, and animal production systems. The following are the laboratories and lecturer personnel in each laboratory in the Department of Animal Production.

a. Laboratory of Dairy Science and Milk Industry

This laboratory is responsible for developing the fields of science and technology related to production biology, industrial engineering, and production systems for dairy cattle and the dairy industry. This laboratory is led by **Prof. Dr. Ir. Tridjoko Wisnu Murti, DEA.** Lecturer personnel at the Laboratory of Dairy Science and Milk Industry are:

| No | Lecturer Name | NIP/NIKA |
|----|--|-----------------------|
| 1 | Prof. Dr. Ir. Tridjoko Wisnu Murti, DEA. | 19611022 198603 1 001 |
| 2 | Ir. Yustina Yuni Suranindyah, M.S., Ph.D., IPM. | 19610614 198503 2 002 |
| 3 | Prof. Dr. Ir. Budi Prasetyo Wb., DESS., DEA., IPU., ASEAN Eng. | 19610527 198511 1 001 |
| 4 | Ir. Sulvia Dwi Astuti SW, S.Pt., M.Sc., IPM. | 19810209 201012 2 002 |
| 5 | Nur Laili Ma'rufah, S.Pt., M.Sc. | 111198906202101201 |

b. Laboratory of Meat, Draught, and Companion Animals

This laboratory is responsible for developing the fields of science and technology related to production biology, industrial engineering, and production systems for meat, draught and companion animals. This laboratory is led by **Ir. Panjono, S.Pt., M.P., Ph.D., IPM., ASEAN Eng.** Lecturer personnel at the Laboratory of Meat, Draught, and Companion Animals are:

| No | Lecturer Name | NIP/NIKA |
|----|---|-----------------------|
| 1 | Ir. Panjono, S.Pt., M.P., Ph.D., IPM., ASEAN Eng. | 19700927 199903 1 001 |
| 2 | Ir. Tri Satya Mastuti Widi, S.Pt., M.P., M.Sc., Ph.D., IPM., ASEAN Eng. | 19750329 200212 2 001 |
| 3 | Muhammad Danang Eko Yulianto, S.Pt., M.Si. | 19840707 201404 1 001 |
| 4 | Ir. Hamdani Maulana, S.Pt., M.Sc., IPP. | 111199404202002101 |
| 5 | Trisianto Nugroho, S.Pt., M.Sc. | 111199503202301101 |

c. Laboratory of Poultry Science

This laboratory is responsible for developing fields of science and technology related to production biology, industrial engineering, and poultry production systems. This laboratory is led by Dr. Ir. Heru Sasongko, M.P. Lecturer personnel at the Laboratory of Poultry Science are:

| No | Lecturer Name | NIP/NIKA |
|----|--|-----------------------|
| 1 | Dr. Ir. Heru Sasongko, M.P. | 19610725 198703 1 002 |
| 2 | Prof. Ir. Wihandoyo, MS., Ph.D. | 19541202 197903 1 006 |
| 3 | drh. Bambang Ariyadi, M.P., Ph.D. | 19751006 200501 1 001 |
| 4 | Ir. Mochammad Fahmi Habibi, S.Pt., M.Sc., IPP. | 11119900720181110 |
| 5 | Joko Sujiwo, S.Pt., M.Sc. | 111199210202201101 |

3. Department of Animal Breeding and Reproduction

The Department of Animal Breeding and Reproduction is an academic implementing element that carries out education, teaching, research, and community service in developing science related to animal breeding and reproduction. The following are the laboratories and lecturer personnel in each laboratory at the Department of Animal Breeding and Reproduction.

a. Laboratory of Animal Breeding and Genetics

This laboratory is responsible for developing the field of animal breeding, and is led by Ir. Dyah Maharani, S.Pt., M.P., Ph.D., IPM.. Lecturer personnel at the Laboratory of Animal Breeding and Genetics are:

| No | Lecturer Name | NIP/NIKA |
|----|---|-----------------------|
| 1 | Prof. Ir. Dyah Maharani, S.Pt., M.P., Ph.D., IPM. | 19700616 200312 2 001 |
| 2 | Prof. Ir. Tety Hartatik, S.Pt., Ph.D., IPM. | 19690310 199903 2 003 |
| 3 | Ir. Galuh Adi Insani, S.Pt., M.Sc., IPM. | 19840908 201803 1 001 |
| 4 | Ir. Akhmad Fathoni, S.Pt., M.Sc., IPP. | 1111992 0320180 2101 |
| 5 | Putri Kusuma Astuti, S.Pt., M.Sc. | 1111994 1220210 1201 |

b. Laboratory of Animal Physiology and Reproduction

This laboratory is responsible for developing the fields of animal physiology and reproduction, including endocrinology, anatomy and physiology, gametogenesis, fertilization, pregnancy, parturition, and reproductive technology to improve the reproductive performance of livestock. This laboratory is led by Prof. Ir. Diah Tri Widayati, M.P., Ph.D., IPM. Lecturer personnel at the Laboratory of Animal Physiology and Reproduction are:

| No | Lecturer Name | NIP/NIKA |
|----|--|-----------------------|
| 1 | Prof. Ir. Diah Tri Widayati, M.P., Ph.D., IPM. | 19671207 199203 2 006 |
| 2 | Dr. Ir. Sigit Bintara, M.Si., IPU., ASEAN Eng. | 19680430 199303 1 002 |
| 3 | Widya Asmarawati, S.Pt., M.Sc. | 19841013 200912 2 005 |
| 4 | Ir. Riyan Nugroho Aji, S.Pt., M.Sc., IPP. | 1111 9910120180 2103 |

4. Department of Livestock Social Economics

The Department of Livestock Social Economics is an academic implementing element that carries out education, teaching, research, and community service that is responsible for developing livestock social economic science. Livestock social economics is related to livestock business development, agribusiness, livestock economic analysis, cooperatives, counseling, business institutions, rural development and livestock development policies. The following are the laboratories and lecturer personnel in each laboratory in this Department.

a. Laboratory of Livestock Agribusiness

This laboratory is responsible for developing the field of livestock agribusiness, and is led by Dr. Ir. Tri Anggraeni Kusumastuti, S.P., M.P., IPM. The scope in the field of livestock agribusiness includes concepts, principles and hands-on experience in animal husbandry-related economics, business development and livestock industry, organization and institutions, management and marketing strategies in agribusiness. Lecturer personnel at the Laboratory of Livestock Agribusiness are:

| No | Lecturer Name | NIP/NIKA |
|----|---|-----------------------|
| 1 | Dr. Ir. Tri Anggraeni Kusumastuti, S.P., M.P., IPM. | 19730416 199903 2 003 |
| 2 | Ir. Mujtahidah Anggriani Ummul Muzayyanah, S.Pt., M.P., Ph.D., IPM. | 19761107 200312 2 004 |
| 3 | Prof. Dr. Ir. Rini Widiati, M.S., IPU. | 19541130 198003 2 001 |
| 4 | Dr. Ir. Suci Paramitasari Syahlani, MM., IPM. | 19650901 199403 2 001 |
| 5 | Tian Jihadhan Wankar, S.Pt., M.Sc., Ph.D. | 111198912201706101 |
| 6 | Ir. Agung Triatmojo, S.Pt., M.Sc., IPP. | 111199604202201101 |

b. Laboratory of Communication and Community Development

This laboratory is responsible for developing the field of communication science and community development, and is led by Ir. Fransiskus Trisakti Haryadi, M.Sc., Ph.D. IPM. The scope of this field is business communication, innovation, community development, regional development, cooperatives, extension, business institutions, rural development and livestock development policies. Lecturer personnel at the Laboratory of Communication and Community Development are:

| No | Lecturer Name | NIP/NIKA |
|----|---|--------------------|
| 1 | Ir. Fransiskus Trisakti Haryadi, M.Si., Ph.D., IPM. | 196509171991031001 |
| 2 | Prof. Ir. Budi Guntoro, S.Pt., M.Sc., Ph.D., IPU., ASEAN Eng. | 197008291996011001 |
| 3 | Ir. Endang Sulastri, S.Pt., M.A., Ph.D., IPM. | 197009131997022001 |
| 4 | Dr. Ir. Siti Andarwati, S.Pt., M.P., IPM., ASEAN Eng. | 197407162002122001 |
| 5 | Ir. R. Ahmad Romadhoni Surya Putra, S.Pt., M.Sc., Ph.D., IPM., ASEAN Eng. | 198107092005011003 |
| 6 | Annisa' Qurrotun A'yun, S.Pt., M.Sc. | 111199211202201201 |

5. Department of Animal Products Technology

The Department of Animal Products Technology is an academic implementing element that carries out education, teaching, research and community service in developing science and technology for livestock products and their by-products. The Department of Animal Products Technology is equipped with three laboratories. The following are laboratories and lecturer personnel in each laboratory in the Department of Animal Products Technology.

a. Laboratory of Meat Science and Technology Laboratory

This laboratory is responsible for developing the field of meat science and technology, and is led by **Dr. Ir. Rio Olympias Sujarwanta, S.Pt., M.Sc., IPM.** Lecturer personnel at the Laboratory of Meat Science and Technology are:

| No | Lecturer Name | NIP/NIKA |
|----|---|--------------------|
| 1 | Dr. Ir. Rio Olympias Sujarwanta, S.Pt., M.Sc., IPM. | 111198809201611101 |
| 2 | Ir. Rusman, M.P., Ph.D. | 196711201998031001 |
| 3 | Ir. Edi Suryanto, M.Sc., Ph.D., IPU., ASEAN Eng. | 196007071986031003 |
| 4 | Dr. Ir. Endy Triyannanto, M.Eng., IPM., ASEAN Eng. | 198412072018031001 |

b. Laboratory of Milk and Egg Technology

This laboratory is responsible for developing the field of milk and egg science and technology, and is led by Endang Wahyuni, S.Pt., M. Biotech. The lecturers at the Laboratory of Milk and Egg Technology are:

| No | Lecturer Name | NIP/NIKA |
|----|--|-----------------------|
| 1 | Endang Wahyuni, S.Pt., M. Biotech. | 19761017 200312 2 002 |
| 2 | Prof. Dr. Ir. Nurliyani, M.S., IPM. | 19600817 198603 2 003 |
| 3 | Prof. Widodo, S.P., M.Sc., Ph.D. | 19700918 199512 1 001 |
| 4 | Ir. Ari Surya Sukarno, S.Pt., M.Sc., IPP. | 19910122 202012 1 012 |
| 5 | Ir. Satyaguna Rakhmatullah, S.Pt., M.Sc., IPP. | 111199211201901101 |

c. Laboratory of Leather, Animal By-Products and Waste Technology

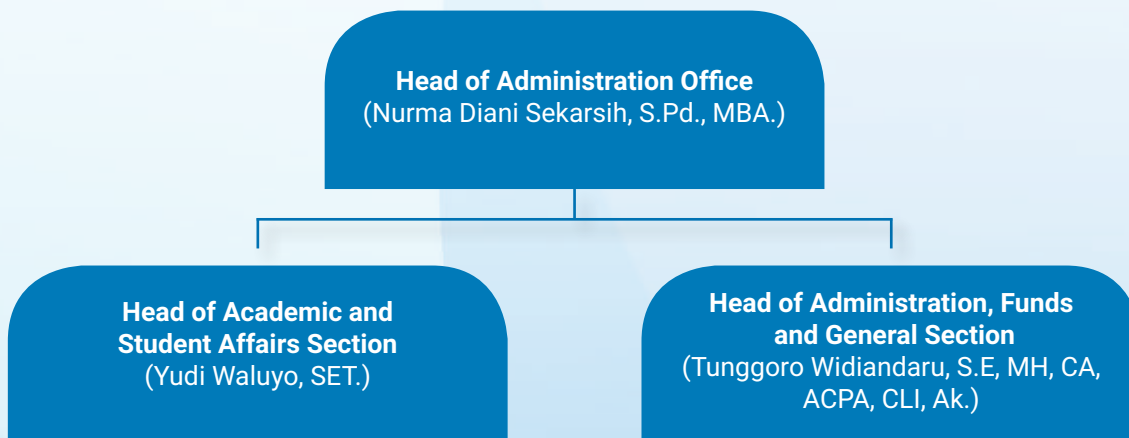
This laboratory is responsible for developing the field of by-products and environmental science and technology which aims to provide a basic scientific foundation on the by-products and waste technology from a livestock industry as an applicable outcome into a valuable product.

The courses taught are aimed at providing a deepening of interest in knowledge about technology for handling livestock by-products and waste that are safe for the environment and led by Ir. Mohammad Zainal Abidin, S.Pt., M. Biotech., Ph.D., IPM. Lecturer personnel at the Laboratory of Leather, Animal by-products and Waste Technology are:

| No | Lecturer Name | NIP/NIKA |
|----|---|-----------------------|
| 1 | Ir. Mohammad Zainal Abidin, S.Pt., M. Biotech., Ph.D., IPM. | 19850829 201504 1 001 |
| 2 | Prof. Ir. Ambar Pertiwinigrum, M.Si., Ph.D., IPM., ASEAN Eng. | 19660209 199003 2 001 |
| 3 | Prof. Ir. Yuny Erwanto, S.Pt., M.P., Ph.D., IPM. | 19710607 199702 1 001 |
| 4 | Ir. Nanung Agus Fitriyanto, S.Pt., M.Sc., Ph.D., IPM. | 19790809 200212 1 003 |
| 5 | Novita Kurniawati, S.Pt., M.App.Sc. | 19801128 200501 2 002 |
| 6 | Ir. Viagian Pastawan, S.Pt., M.Sc., Ph.D., IPP. | 111199110202101101 |

B. Academic Administration Managers

In carrying out the teaching and learning process, the Faculty Leaders are assisted by the office of administration as the main managers of administration. The Office of Administration is led by the Head of the Administration Office who is assisted by the Head of the Academic and Student Affairs Section and the Head of Finance Administration and General Sections in carrying out her duties.



1. Duties of the Head of Administration Office
 - a. Designing the work plans and programs for the Faculty Administration Office and prepare for the Faculty work plans and programs;
 - b. Collecting and learning the laws and regulations in the field of administration, academic, student affairs, finance, staffing, and equipment;
 - c. Collecting and processing the administrative, academic, student affairs, financial, personnel and equipment data;
 - d. Carrying out correspondence, household affairs, equipment, staffing, finance, archives and Supplies tasks;
 - e. Managing official meetings and ceremonies within the faculty;
 - f. Managing administration for education, research, and community service;

- g. Managing student affairs and faculty alumni relations;
 - h. Managing monitoring and evaluation of activities within the faculty.
 - i. Managing administrative planning and information services,
 - j. Managing the archiving of documents and letters related to faculty activities;
 - k. Preparing reports for the Faculty Administration Office and preparing reports for the faculty.
2. Duties of the Head of Academic and Student Affairs Section
- a. Designing work plans and programs for the academic and student affairs section and preparing work plans and programs of the section units;
 - b. Collecting and reviewing the laws and regulations related the academic and student affairs and alumni;
 - c. Collecting and processing the data of education, research, community service, student affairs and alumni;
 - d. Providing the academic and student administration services;
 - e. Creating plans for academic facilities needs;
 - f. Collecting and classifying data on curriculum targets achievement;
 - g. Organizing scientific meeting activities within the faculty level;
 - h. Providing research administration and community service in the faculty level;
 - i. Processing the permits/recommendations for student activities;
 - j. Preparing proposals for outstanding students selection;
 - k. Preparing for the implementation of university-level student activities;
 - l. Managing scholarships, career development and student welfare services;
 - m. Monitoring the implementation of student and alumni development activities.
 - n. Providing academic, student and alumni information systems;
 - o. Presenting information in the academic and student affairs;
 - p. Archiving documents and letters related to academic matters.
3. Duties of the Head of Finance Administration and General Affairs Section
- a. Developing a work plan and program for finance administration and general affairs;
 - b. Collecting and reviewing laws and regulations related to finance, business, household, staffing and equipment;
 - c. Collecting and processing financial, administrative, household, employment, and equipment data;
 - d. Drafting budget plans (government budgets and community budgets);
 - e. Managing receipts, storing, bookkeeping, expenditure and finance accountability;
 - f. Making payment of salary, honorarium, overtime, vacation, official travel, work and purchases contract, and other expenses that have been verified;
 - g. Managing financial, administrative, staffing and equipment information systems;
 - h. Preparing proposals for the appointment and replacement of treasurer/PUMK/logistics officers
 - i. Archiving documents and letters related to administration, housekeeping, personnel and equipment;
 - j. Managing the correspondence and filing affairs within the faculty;
 - k. Managing the cleaning, beauty and safety of the environment;
 - l. Managing the reception of leaders at official and scientific meetings in the faculty level;
 - m. Assisting the equipment and logistics management;

- n. Making proposals for formation, transfer, employee development and welfare;
- o. Preparing proposals for appointment of extraordinary lecturers;
- p. Managing employee leave affairs;
- q. Processing the Work Implementation Assessment List (DP3), Rank Order List (DUK), Employee Card (Karpeg), Wife Card (Karis), Husband Card (Karsu), Additional Income Application Card for PNS (KP4), and Personal Tax Reports (LP2P);
- r. Assisting the settlement of employment cases.

C. Supporting Units

Supporting elements function to assist the Faculty Management in carrying out the process of teaching and learning, especially in academic implementation. Supporting Elements in the Faculty of Animal Science include: library unit, computer laboratory, Integrated technical farm processing units (stables, cattle, machines and grass gardens). If necessary, the number and type of supporting elements can be added as needed.

1. Library

Task and function:

The Library at the Faculty of Animal Science Universitas Gadjah Mada has main tasks to search, collect, process and present, and track the information in printed and digital formats, which are needed by the Faculty's academic community to support the smoothness of the learning and teaching process.

a. Service type:

- Circulation Services; take-home borrowing, reference services, read in the place
- Photocopying service
- Open Monday-Friday during working hours and Saturday at 08.00-13.00 WIB

b. Collection:

Textbook

On-line databases, journals and e-books subscribed by the University

Scientific work (thesis, dissertation)

Field Work Practices (PKL), Merdeka Belajar Kampus Merdeka (MBKM), Engineering Practice, Case Studies Reports

c. Facility:

Assistance in finding reference books/journals

similarity check services

reading rooms

free wifi area and internet

automation system

locker boxes

air-conditioned room.

d. Term and Conditions for borrowing services:

Showing Student Identity Card (KTM) for member activation

Provisions for facility users (book borrowing): Maximum 3 books, length of borrowing maximum 7 days.



2. Department/laboratory co-working spaces

The Department/laboratory co-working spaces are discussion rooms that provide reference books and access to databases.

3. Computer Room

The computer room is a facility to support courses that require computer facilities and a service unit for students who will write their final assignment (PKL Report, thesis, and others), and internet facility services.

4. Audio Video Editing Studio

Audio Video Editing Room is one of the facilities managed by the Laboratory of Communication and Community Development. The main function of this room is for practice activities. It can also support the lectures and develop the students and lecturers' creativity. Available facilities in this room include a soundproof studio for digital audio and visual content production and editing space. A wide variety of audio visuals content created by the Faculty of Animal Science academic community have been produced and uploaded to the Faculty's digital platforms.

5. Integrated Technical Farm Processing Unit (UPT).

The Integrated UPT is a one-stop management unit that coordinates laboratory activities and other units such as abattoir, Plaza Agro Gajah Mada, stables, closed houses, dairy cattle sheds, poultry sheds, meat, draught, and companion animals houses, metabolic cages, horse riding arenas, dairy processing units, garden plots, collection of green fodder, greenhouse, sewage treatment unit, compost house, and biogas.



The Integrated UPT manages tools, machines, materials, land, stables, and livestock, including employees.

6. Animal Science Learning Center (ASLC)

Animal Science Learning Center (ASLC) is a five story building equipped with all high-tech laboratory equipment. ASLC is one of the 10 (ten) centers at UGM that are being developed and is expected to increase the competence and capacity of the Faculty of Animal Science in developing knowledge and tropical animal industry. This facility is used to increase productivity by developing the Tri Dharma for lecturers and students. Students are also supported with better learning infrastructure in the ASLC building.

7. Sports Facilities and Infrastructure

The Faculty provides sports facilities and infrastructure such as tennis courts, table tennis, badminton court, volleyball court, fitness center, equestrian arena, and basketball court.



SEPEDA KAMPUS
Universitas Gadjah Mada



IMPLEMENTATION OF EDUCATION

A. Education Program

The Faculty of Animal Science UGM has one undergraduate study program, the Study Program of Bachelor in Animal Science and Industry (SP-BASI). The educational program is designed according to the new education paradigm, Outcome-Based Education (OBE) with student centered learning methods. In addition, continuous learning is carried out based on the latest research results and will continue to be improved. The graduates are expected to master the scientific foundations, knowledge and methodology so that they can think, behave and act as a scientist, able to apply knowledge and technological skills in productive activities and service to the society, and able to follow the development of knowledge and technology in the global. After completing the education program at the UGM Faculty of Animal Science and fulfilling all requirements, a bachelor's degree is awarded: Bachelor of Animal Science (S.Pt.).

B. Educational Activities

The planning, designing, and implementation of educational programs apply the Semester Credit System (SKS) units as the measurement for educational weight, especially those related to students' study loads such as lectures, practice, field work practice, seminars, and others.

1. Semester Credit Score

a) Semester credit scores for Lectures

For students one credit consists of three kinds of integrated activities:

- 50 minutes scheduled face-to-face meetings with teaching staff
- 60 minutes of structured activities: activities that are not scheduled but planned by the teaching staff
- 60 minutes of independent academic activities: activities that must be carried out by students independently

For lecturers, one credit consists of three integrated activities:

- 50 minutes scheduled face-to-face meetings with students
- 60 minutes planning and evaluation of structured academic activities, and
- 60 minutes of course material development activities

b) Semester Credit Score for Seminars

Students are required to present papers in seminar classes. One credit is equivalent to:

- 100 minutes of learning process activities
- 70 minutes of independent activity.

c) Semester Credit Scores for practice, studio practice, workshop practice, field work practice, thesis, research, design, or development, military training, student exchange, apprenticeship, entrepreneurship, and/or community service. One credit is equal to the completion of 170 (one hundred and seventy) minutes per week or total activities 40 hours per semester.

- d) Credit scores for 9 (nine) activities in the Merdeka Belajar Kampus Merdeka activity (MBKM) is calculated based on:
- learning for more than 16 (sixteen) weeks or 560 (five hundred and sixty) hours or cumulative up to 24 weeks or 840 (eight hundred and forty) cumulative hours given recognition equal to 20 (twenty) credits;
 - learning for more than 24 (twenty four) weeks or 840 (eight hundred and forty) cumulative hours up to less than 40 (forty) weeks or 1400 (one thousand four hundred) cumulative hours are given additional credit recognition in the amount of 1 (one) Credit for each additional 1 (one) week or 35 (thirty five) cumulative hours; and
 - learning between 40 (forty) weeks or 1400 (one thousand four hundred) hours cumulative up to 48 (forty eight) weeks or 1680 (one thousand six hundred and eighty) cumulative hours are given recognition equivalent to 40 (forty) credits.

2. Study Load in One Semester

The maximum study load taken by students in one semester is 24 credits. In the first and second semesters, students take courses in sequential packages of 21 and 22 credits. In the third to eighth semester, students can take courses up to 24 credits consisting of compulsory course packages offered and may also take elective courses with the approval from the Academic Advisor (DPA).

There are no prerequisite courses in each course. The amount of credits taken per semester do not depend on the achievement of the student's achievement index in the previous semester. Students can take courses in other study programs at UGM and outside UGM. In addition, students can also take the other form of learning activities (BKP) according to the valid MBKM guidelines (can be downloaded on the website of the Faculty of Animal Science UGM).

3. Student Enrollment

Student enrollment is carried out with two systems: new student admission and re-enrollment for current students. Registration procedures and conditions for new and current students are determined by the university. Students who have made registration can participate in all academic activities according to their study plan.

4. Academic Supervision and Student Study Plans

Before carrying out study activities, students must submit a study plan at the beginning of each semester. The study plan is submitted by filling out a study plan online form through Simaster UGM at a predetermined period of time, after students meet all requirements. Completion of the study plan cannot be represented unless for very basic reasons. In submitting a study plan, students must consult with the Academic Advisor to obtain formal approval online. Delays in filling in Study Plan at the specified time may result in losing their academic rights in that semester period.

Duties of Academic Advisor (DPA):

- a) provide qualified academic supervision;
- b) encourage students under his supervision to become quality learners and success;
- c) guide the students to make plans and be smart in carrying the learning process at Universitas Gadjah Mada, in order to graduate obtaining the program competencies;
- d) help the students to internalize the noble values of Universitas Gadjah Mada;

- e) assist students in developing intellectual character commendably;
- f) motivate students to become graduates who always adapt to science and technology development.

5. Provisions for submitting a study plan/filling in a Study Plan Card (KRS):

- a) students fill out a study plan online at Simaster UGM.
- b) students meet the academic advisor to consult about the study plan and then the academic advisor give approval online,
- c) if until the deadline, the KRS is not approved by the academic advisor, the student's name will not be printed on the course attendance list and will be automatically cancelled.
- d) students are given the opportunity to make changes and cancellations of KRS, no later than 2 (two) weeks after the class starts,
- e) changes and cancellations of study plans (KRS) must be under approval from the Academic Advisor (DPA).

6. Lectures and Practicum

Students are required to take part in educational activities such as lectures, practicums, and other activities according to the study plan and schedule. Lectures are held for 14 weeks (face to face meetings) in one semester. Students must fill in the attendance list for every lecture/class, and must attend a minimum 75% of the class attendance. If students cannot attend lectures with a minimum attendance, students are not allowed to take exams with any reason, except: illness, the main family is passed away, or being an ambassador of the Faculty/University official activities at national and international levels. Permission Letter is submitted to the academic section at no later than 5 (five) working days after the student absences in the classes.

7. Examination

Examination is held to evaluate the students' participation in the lectures activities. Examinations for all courses are carried out in two stages, midterm exams and final semester exams. Examinations are held in writing or verbal in a specified time. Students are allowed to take the exam if they meet some specified requirements. Examination results are announced to students 14 working days after the exam is carried out through Simaster.

Terms for Course and Practice Examination

- a) Examination is held and scheduled once for mid semester examination and once for final semester examination according to the University academic calendar,
- b) Practice examination is arranged by the practice coordinator separately,
- c) Undergraduate thesis examination and field work Practice is arranged according to the faculty's rule

8. Conditions for Course and Practice Examination

Students can take course or practice examinations if meet all conditions below:

- a) Be Recorded as active student during the semester as indicated by the validation of study plan card by the Academic Supervisor;
- b) Meet the administrative requirement issued by the Academic and Student Affairs Section;
- c) Have attended the class activities of the courses 75% of the face to face meeting at minimum;



- d) take the practice examination, students should attend the practice classes according to the conditions applied;
- e) In a condition students cannot attend the examination due to sickness, main family is passed away, or to be official representatives of the Faculty/University, notification shall be given on the day of examination and letter of permission shall be submitted to the academic section by the latest 3 days of working hours;
- f) Follow-up examination is organized by the academic section.

9. Grading

- a) The grading of learning process uses the relative grading system as follows:
- b) The grading is as follows:
 - A is equal with 4,0 (four point zero)
 - A- is equal with 3.75 (three point seventy-five)
 - A/B is equal with 3.5 (three point five)
 - B+ is equal with 3.5 (three point five)
 - B is equal with 3.0 (three point zero)
 - B- is equal with 2.75 (two point seventy-five)
 - B/C is equal with 2.5 (two point five)
 - C+ is equal with 2.25 (two point twenty-five)



C is equal with 2.0 (two point zero)

C- is equal with 1.75 (one point seventy-five)

C/D is equal with 1.5 (one point five)

D+ is equal with 1.25 (one point twenty-five)

D is equal with 1 (one), E is equal with 0 (zero)

- c) Students who do not submit resignation through *Simaster* will get an E score automatically.
- d) Students who have not completed the scoring component to a lecturer, they will be stated as uncompleted (*TL: tidak lengkap*), if it has not been completed in a month since the score has been announced, the status of uncompleted (mark as TL) will be changed to E score.
- e) Students are able to raise a question to the supporting lecturer regarding the scoring result they get and the supporting lecturer may also give the clarification concerning the scoring process.

10. Student Course Remedial. Students are able to take remedial courses which have been taken for score improvement (Grade Point Average). By having this remedial program, the score that will be used is the best score.

11. Course Specialization

At the end of the 4th semester, the students choose the topics and undergraduate thesis advisor from the department that they are interested in by filling the specialization form. Later, the Study Program will send the lists to the Head of Departments. Next, the head of the Department organizes the department meetings that are attended by the Heads of Laboratories to distribute and determine the thesis advisors. After getting the result, the Head of the Department sends a letter to the Head of the Study Program to inform the result of the Department meeting appended with the attachment of a specialization list of students along with their determined thesis advisor. Then, The Study Program proceeds the next step, which is the determination of thesis advisor for the student who has fulfilled the requirements. After it is done, the Decree of Thesis Advisor that indicates the student advisor alteration from previously the academic advisor changes to thesis advisor. The thesis proposal must be legalized by the Head of Study Program at the end of the 5th Semester.

12. Undergraduate Thesis Preparation

The undergraduate thesis preparation for the student of the Faculty of Animal Science UGM is one of the prerequisites to get the bachelor degree. Thesis must be written based on research. Before executing the research for a thesis, the student has to fulfil the prerequisite and have a legal thesis advisor. Students who have run research without implementing the procedure, will be announced as unauthorized.

Terms and Conditions for students to be able to do the research:

- a). Has completed semester 4 (semester 5 is able to begin the research)
- b). Has written the undergraduate thesis research proposal
- c). Obtain a minimum GPA of 2.00
- d). The number of D score in total credits is less than 25%
- e). No E score (from total 80 credits)

13. Undergraduate Thesis advisor

The undergraduate thesis advisor has the duty to guide the students with the final assignment, starting from the proposal, research process, undergraduate thesis writing, and its research result. The thesis advisor comes from the department/laboratory of the course specialization. The thesis advisor does not have to be an academic advisor.

14. Seminar

A seminar is a course that supports the finalization of the final thesis and to prepare the students to share the idea in terms of proposal or research result as the attempt to develop the student's knowledge. The proposal that will be presented in the seminar must be based on consultation results and approved by the thesis advisor. This seminar takes place in a whole semester, no postponement to next semester. This seminar course is organized parallel according to the department specializations.

15. Field Work Practice

To improve the student skills in farming, the Faculty of Animal Science UGM obliges students to do Field Work Practice with a weight of 2 credits. Field Work Practice is done in an institution (either company or agency) that is related to the husbandry industry. The students who will take

this course must fulfill the basic course and half of elective courses which can be the provision to implement the field work practice in the workplace. Field work practice is organized between semester or active semester. The students who do the field work practice in the active semester are permitted maximum 3 times to leave the class session. Field work practice is done under a guidance of lecturer supervisor from the faculty or field supervisor from the agency/company in which the field work practice takes place. The duty of the lecturer advisor is to implement the guidance to determine the location, implementation and also the report of field work practice. The field supervisor duty is to implement the guidance in implementing the activities in the workplaces. The place/location of work field which is often used is able to be seen/downloaded in <http://ugm.id/lokasipkl>

The requirements for applying field work practice are as follows:

1. Listed as students in the current academic year
2. Has accomplished semester 4 with a GPA minimum 2.00. D score is not allowed to pass 10% and without E score (from total 80 credits)
3. Enroll the field work practice (in its credit) on registration period (before the implementation of work field practice begins)
4. Fill in the form of field practice work registration before doing the session

The series of field work practice activities cover the registration, title determination, location determination, the advisor appointment, proposal preparation, the briefing, the implementation, presentation examination, and the field work practice report supervision.

The proposal writing arrangement is guided by the lecturer who supervises the field work as appointed by the Head of the Laboratory. Students who have finished the field work practice must submit four copies of printed powerpoint (PPT) files of their field work examination materials. The structure of the PPT contains background, objectives, benefits, general information of the company, field work practice activities, discussion, closure and signed by the lecturer who supervises this field work activities. Students also have to submit the activity forms and the field work practice assessment signed by the institution and legalized by the institution stamp to the Academic and Student section by the latest 10 calendar days after the field practice work activity ends. The field work practice activity report is made as the administrative complement of student scientific responsibility after conducting the field work practice that has been supervised and assessed fully by the appointed lecturer.

Students must submit the field work practice report to the Student and Academic Section by the latest one week after the examination to be validated by the Head of Study Program by the latest 3 weeks after the examination. If the students cannot fulfill the requirement by submitting the report in date mentioned, they will be given a penalty i.e., the decrement of 2 level grade (for example: A score becomes A/B) and if the students do not submit the report within three months, they will get C score or must do remedial field work practice activity in another institution.

The complete procedure of the field work practice can be read in the revised edition of the field work guidance book 2019.

16. Comprehensive Examination

The comprehensive examination is mandatory to enroll in Judicium. The requirements to take the comprehensive examination is to pass compulsory credit with a total 103 without score E. The students who will take the comprehensive examination must register to the Student and Academic section. If they fulfill the requirements, they can take the comprehensive examination based on a schedule which has been arranged by the Student and Academic Section.

17. The undergraduate thesis defense

The undergraduate Thesis defense is arranged by the examiner board consisting of 3 (three) lecturers who are appointed by the Vice Dean for Academic and Student Affairs collaborated with the Head of Study Program by considering the thesis scope. The advisor and co-advisor acted as the chairman of the board examiners. The result of the undergraduate thesis defense will be directly announced by the examiner board after the defense finishes.

The requirements for taking thesis defense:

- a) No E Score
- b) D Score \leq 25%
- c) Min GPA 2.00
- d) Submit the Undergraduate Thesis
- e) Submit the thesis advisory form
- f) Submit the thesis consultation form
- g) Submit the thesis defense request form
- h) Submit the proof of submission of the field work practice report
- i) Proof of PPSMB completion (for students who start from 2013 academic year)

The registration of thesis defense max 1 year after the research activity is done. If the student is late to register the undergraduate thesis defense, the student must do the remedial research. After being announced as having passed the examination, students still need to make a revision. Revision is given maximum for 2 (two) months. If within two months revision is not submitted, the score will be cancelled and the student must do the remedial examination. For those who have taken the thesis defense and still need to improve the score, they will be getting a tolerance for not attending a judicium for max 6 (six) months, with the condition that the study period is still active.

C. The Study Result Evaluation.

The study result evaluation is done 5 (five) times i.e. The final semester evaluation, the first 2-year study evaluation, the eight semester evaluation, the study time limit evaluation, and the final program evaluation by considering the GPA, total credits and study length. The determination of student GPA is as follows:

- a). To evaluate the student study result we use Grade Point Average (GPA).
- b). $GPA = \frac{[(\text{total credit of lecture} \times \text{score value})]}{\text{total credit of course activities which have been taken}}$
- c). Regarding the GPA calculation, the letter value changes to numeric value i.e. A = 4,0; A- = 3,75; A/B = 3,5; B+ = 3,25; B = 3,0; B- = 2,75; B/C = 2,5; C+ = 2,25; C = 2,0; C- = 1,75; C/D = 1,5; D+ = 1,25; D = 1; E = 0.

- d) Each course will only have 1 score result of formal value integration or continuous assessment that has been adjusted to its material weight.

1. The evaluation of the first two year

At the end of the first two years, after the students are registered for the first time, the study result is evaluated to determine if the student is able to continue the study in the Faculty of Animal Science UGM or not. Student is allowed to continue the study if they meet the requirements:

- a). Collect minimum 30 credits
- b). Accumulative GP min 2.00
- c). No E score within the 30 credits that have been evaluated
- d). By within these 2 years, if the students are able to collect more than 30 credits, the evaluation will be taken from the best score from its 30 credits

2. The evaluation of eight semesters.

The evaluation of eight semesters is done for the students who have not graduated until the end of eight semesters. The eight-semester evaluation is based on minimal achievement of 80 credit with GPA min 2.00. The evaluation of eight semesters is applied for giving the warning to the students who have not completed the minimum requirement of total credits and GPA.

3. The Evaluation of Study Limit.

The evaluation of study limits is done for those who have not graduated until the end of 10th semester. The students who have not graduated but they already have done research for thesis writing, will have an opportunity to extend their study in one semester or shorter based on its condition by submitting the request to the Dean acknowledged by the Thesis Advisor and the Head of Department.

4. The Final Program Evaluation.

The evaluation of this study result is used as foundation to determine whether the student has completed the requirement for passing the Study program of Bachelor in Animal Science and Industry degree i.e.:

- a. All required courses have been completed
- b. Complete minimum 144 credits and maximum 148 credits including the undergraduate thesis (consist of 107 compulsory credit courses and 37-41 elective credit courses). If it is more than 148 credit courses, the last elective course taken will not be included in the transcript.
- c. The D score in the total credits is less than 25%
- d. No E Score
- e. minimum GPA is 2.00
- f. Maximum active study length is 5 (five) years (10 semester), unless the students get the study extension, i.e., as stated in the evaluation provision of Length of Study Limit determination
- g. To authorize the students who have passed the bachelor degree education and fulfilled all the requirements which have been determined in a judicium meeting.
- h. The exceeded credits which pass the maximum line of total credit courses will not be included in transcript but a letter of statement will be made to explain that the student has taken the



course and it will be used as the alteration of transcript. The courses taken are basically the last elective courses (not a remedial course)

- i. Principally, the E score cannot be cancelled in transcript, unless the E score obtained is from the last elective course taken, after the cumulative of total credits reach more than 144 credits.

5. The graduate predicate

The predicate received by graduate students is defined as follows:

- a). Honors Predicate (Cumlaude):
 - GPA 3.51 – 4.00
 - Maximum study period max 5 years
- b) Very Satisfactory:
 - GPA 3.01 – 3.50
- c) Satisfactory:
 - GPA 2,76 – 3,00

D. Study leave

Students who are unable to attend the academic activity must propose a study leave request. Students can propose for a study leave if they have passed the first two years of the study time and the proposal is submitted in the semester prior to their study leave begins. Duration of the study leave up to four semesters can be given by the Dean of the Faculty of Animal Science UGM. If it is more than four semesters, the study leave must be proposed to the Rector of UGM. The leave proposal form must be acknowledged by the Head of Academic/Thesis Advisor. The students who will be active again after having leave must propose for activation to the Dean of the Faculty of Animal Science UGM. The leave proposal form and activation proposal must be submitted through Simaster (simaster.ugm.ac.id) according to the schedule of the registration.

E. Sanction for Student Violation

Students who deliberately violate the academic regulation such as creating a fake signature of the lecturer, or fake signature in one of course attendance, will be given academic punishment: cannot attend the lecture session in 1 (one) semester and other ethical violations will be given sanction based on applicable rules.



EXTRACURRICULAR ACTIVITIES

The extracurricular activities in the Faculty of Animal Science Universitas Gadjah Mada is managed by the Faculty Student Executive Council, while the implementation is supervised by the Faculty's Student Representative Council. Generally, the extracurricular activities are divided into 4 (four) main parts, as follows:

A. Reasoning and Creativities.

The reasoning and creativity activities, either at university or faculty level, are generally done in the form of seminars, symposiums, training and discussion forums.

B. The talent and passion

The passion includes the hobby and all activities that can improve the non academic achievement. It also includes a platform to expand the talent and passion especially in sports.

C. Social service activities

This activity is a manifestation of love, a sense of mutual help and mutual care from students to the community who need to receive assistance. These social service activities can be in terms of basic needs donation (staple food for example), blood donation, free treatment, etc. There are some activities which become a proof of social service to the local community i.e., the cleaning the neighborhood, sahur and breakfasting with local people in Ramadhan Holy Month.

D. Religious activities

The religious activities is the activity that are imbued with religious values in form of inner vibration that can lead and guide the behavior itself to the connection between Human and God and the connection between the community and the universe that cover the spiritual activities either in Muslim, Catholic, Christian, Hindu and Buddhist. In the curriculum 2021, the participation of student organizations either in Faculty level or University level will be recorded in SKPI (Diploma Supplement).



STUDENT ORGANIZATION AND PARENTS ASSOCIATION (POTMA)

A. Student Organization

Student organizations at the Faculty level consist of Autonomous Council (BO) and Semi-Autonomous Council (BSO). The Autonomous Council consists of: Student Executive Council (BEM) and Student Representative Council (DPM). Semi-Autonomous Council (BSO) consists of eight organizations, i.e.:

1. Faculty of Animal Science Muslim Family (KMFPT)
2. Christian Student Family (PMK)
3. Catholic Student Family (KMK)
4. Animal Science Student Forum (Fosmapet)
5. Caravan Mountaineering Club (CMC)
6. Student Pers Publishing Agency (Gallusia)
7. *Kandang Kreasi* (Albazia saman, Alfafa Symfoni, *Sports Club*, Grup Band)
8. Agropreneurship Community (APC)

In the University level, students can join the club to facilitate their hobbies and talents, as follows:

1. Basic sports and athletics
2. Game sports such as badminton, volleyball, basketball, football, futsal, Sepak Takraw, Tennis, Table Tennis, Chess, and Horseback Riding.
3. Martial Arts such as Kempo, Martial Arts, Tae Kwondo, Judo, Karate, etc.
4. Arts: Painting, Dance Art (Java, Bali, New Creations), Sound Art (*Keroncong*, Band Chorus), Theater, Drum Band.
5. Spiritual (Muslim, Christian, Catholic, Hindu and Buddhist),
6. Professional activities such as cooperative and student publishing
7. MAPAGAMA
8. Skydiving,
9. PPPK and Scouting

B. Student Parents Association (POTMA)

The Student Parents Association (POTMA) of the Faculty of Animal Science UGM was established on November 8, 1992 with the aim of:

1. Rallying cooperation between fellow members within the Faculty of Animal Science UGM,
2. Assisting the Faculty of Animal Science UGM in implementing Tri Dharma of Higher Education,
3. Improve communication between members,
4. Improve communication with the Academic Community of the Faculty of Animal Science UGM

As stated in the Bylaws article 1, each student's parent automatically becomes a member of POTMA, Faculty of Animal Science UGM. The role of POTMA in supporting the Tri Dharma of Higher Education can be recognized, especially by students, including:

1. helping students threatened by drop off due to run out of the study time by approaching them, parents, thesis advisor/academic advisor and also faculty administrators
2. helping students who suffer from mental illness / stress with an approach / counselling, if it is necessary, accompany them to do counselling to a psychologist.
3. collecting funds for students who lack of research funding for completing their undergraduate thesis



COURSE SYLLABUS

A. Compulsory Courses

1. Islamic Education (UNU2111000, 2/0)

Students are able to understand and explain the concept of divinity in Islam, the relationship between faith and taqwa, various kind of problems in modern life and seek solutions to solve problem of modernism, knowing in depth about human nature, law, human rights, democracy in Islam, applying *akhlakul karimah* in life and its relation to Sufism, understanding the Islamic concept of science, technology and art, explains the meaning of Islam as a religion of *rakhmatan lil alamin*, the concept of civil society. Islamic economic concept, Islamic cultural concept and Indonesian national political concept.

2. Catholic Education (UNU2111001, 2/0)

Provide a basis on the depth understanding of Catholicism. Also learn about the dialogue between people, dialogue with other religions, and attitudes of injustice.

3. Christian Education (UNU2111002, 2/0)

Direction of the main content, the situation of the church and society, the role of the Bible in the development of church citizens, the main problems in the life of faith, the study of the Bible, how to use methods, and personality coaching.

4. Hindu Education (UNU2111003, 2/0)

The history of the emergence of Hinduism and its distribution to four continents, *Panca Sradda*, spiritual path, *catur marga* as a way of life. *Catur warna*/four kinds of *catur warna* ties and their duties, ethics/*cilakrama Yadnya Samskara* Consolidation.

5. Buddhist Education (UNU2111004, 2/0)

Definition of Buddhism, Hinayana and Mahayana. History of Gautama Buddhism. Buddhist followers, Ethics and morality. The development of Buddhism, worship and devotionals. Canon Leturgency Buddhism in Indonesia.

6. Kong Hu Chu Education (UNU2111005, 2/0)

Basic law, the history and its development and institutions, the main teaching points and faith knowledge of scripture. Also, the fundamental point as well as the interpretation. Religious system/governance of worship and self-development

7. Pancasila Education (UNU2111006, 2/0)

This course studies the character of human *Pancasilais* in terms of thinking, attitudes, and actions. Increase the sensitivity, concern, and commitment to participate in solving various fundamental problems of society, nation and state based on Pancasila values, religious-tolerant,

humanist, nationalist, democratic, and equitable. Able to produce innovative-creative works to be dedicated to society, nation and state based on the values of Pancasila.

8. Indonesian Language (PTU2111001, 2/0)

This course studies the ability to speak good and correct Indonesian language to hold scientific communication. The discussion material includes Indonesian language and its variety, spelling writing is reviewed from phonological aspects, morphological aspects and syntactic aspects. Writing letters, words, sentences and paragraphs. Language and style in effective writing.

9. Civic Education (UNU2112007, 2/0)

This course studies the five pillars by prioritizing a process-oriented way of learning with the aim of developing abilities, independence, and responsibility. Students, bringing learning materials closer to life and environmental problems by prioritizing international insights with the use of information technology.

10. General Biology (PTU2111002, 2/1)

This course studies the basic knowledge of plants and their physiology that can be used as a support in studying the science of animal feed, including cytology, histology, organology, aquatic households, nutrients, photosynthesis, assimilation of nitrogen, enzymes and their development. Also study *ikhwal* things related to the life of farm animals, which include about animal cells, organic tissues and systems in the body, the origin of animal creatures, the systematic basis of the animal and the basics of its physiology.

11. Basic Physics (PTU2112005, 2/1)

This course studies the phenomena of kinematics and dynamics of motion, fluid mechanics, temperature and heat as well as phase changes in substances, laws of thermodynamics. After studying this course, the expectation is students can have a complete understanding of the basics of physics and its application, both in advanced courses, as well as to understand a number of scientific phenomena in various everyday life. Including those related to the field of animal science.

12. Basic Chemistry (PTU2111003, 2/1)

This course studies atomic structure, atomic bonds, periodic arrangements, radioactivity, gas laws, *stockimetry*, solutions, thermochemistry, colloida, diffusion, osmosis, effusion and phase diagrams. The students also study hydrocarbon compounds both aliphatic and oromatic and cyclic which include chemical and physical properties, naming and manufacturing laboratories and reactions of cyclical

13. Mathematics (PTU2111004, 2/0)

This course studies basic mathematics, especially being able to understand, analyze and solve mathematical (basic) problems logically. Studying functions, graphs of functions, algebraic functions, transcendental functions, limits of functions and limits of rows, derivative intervals, meaning of derivatives in the science of measure and physics, specific intervals and normal mathematical and role.

14. English (PTU2112006, 2/0)

The course studies general English terms including the world of Animal Science and Industry, and as a media of international communication and publication. Apply comprehensively Listening Comprehension, Structure and Written Expression, Reading Comprehension and Vocabulary, and Writing for Paper, and Computer Based Test, Reading, Listening, Speaking, and Writing for iBT, and mastering the Test of Written English.

15. Seminar (PTU2117009, 0/1)

The course studies seminars and the types of scientific meetings, workshops, trainings, seminars, symposia, panel discussions, meetings, congresses, summits, conferences, effective communication and scientific presentation. Effective communication; disseminated scientific and technical presentations, seminar ethics and paper making techniques, seminar ethics, and paper making techniques. In this seminar, students present proposals or research results that have been consulted with thesis advisor. The organization of the seminar is managed in parallel by the manager of study interests.

16. Thesis (PTU2118011, 0/4)

This course studies the preparation, implementation and completion of research both in the field, in the cage or laboratory, which is then followed by a thesis exam in front of the Testing Team.

17. KKN/Student Community Service (UNU222001, 0/4)

This course trains students to do community service in one or four fields, namely physical infrastructure, socio-cultural, production improvement, and public health in an interdisciplinary manner. which is carried out in cities or villages with the aim of improving student personality, community empowerment, and institutional development.

18. Field Work Practice (PTU2117010, 0/2)

This course studies the skills, knowledge, understanding and understanding of the types of institutions, activities of companies or commerce in the field of animal husbandry.

19. Research Methodology (PTUP2113019, 2/0)

This course studies research design and carries out research by following the rules of the correct research method. The topics taught in this course are the introduction of research types and stages of research design starting from problem formulation, literature review, hypotheses, variables, samples and populations, instruments and measurements and various research designs namely experiments, surveys, qualitative research, data interpretation analysis, building discussions in the field research and writing research reports.

20. Introduction to Statistics and Experimental Design (PTUP2113018, 3/0)

This course studies data, measures of central tendencies and dispersions, probabilities and continues to introduce various statistical tools that can be used in research.

21. Basic Management and Entrepreneurship (PTUE2112014, 2/0)

This course studies the basic science of managing an organization / company in the livestock industry in facing a dynamic and challenging organizational / company environment. The topics

given in this course are the role of management, management environment, basic functions in management, namely planning, organizing, procurement and management employees, supervision. In addition, the basic topic of entrepreneurship is also given, namely the introduction of the character of an entrepreneur and the concept of creativity and innovation in entrepreneurship.

22. Anatomy and Physiology (PTUP2111016, 2/1)

This course studies animal anatomy which is focused on cultivated animals with material on systemic anatomy in the animal body both macroscopically and microscopically (histology). Broadly speaking, in the animal's body there is a respiratoria systema, circumferential digestoriam, genitalia urinariam, nervosa, as well as osteology and myology, but in lectures, a detailed discussion will focus on the systema digestoria, respiratoria, osteology, and myology, as well as the genitalia of males and females, including comparative organs of some farm animals.

23. Basic Genetics (PTUP2112017, 2/0)

This course studies the basic knowledge of cell biology and the phenomenon of trait inheritance. Studying the various functions of genes and chromosomes, Mendel's Law and their extension in livestock as well as changes in the order of genetic material. General introduction of quantitative genetics in livestock and the introduction of molecular genetics.

24. Introduction to Animal Science and Industry (PTUD2111012, 2/0)

Learn about the dynamics and prospects of the livestock industry. Discusses livestock according to the type of feed and digestive system, livestock life, and specific signs of livestock, as well as the influence of the tropical environment on livestock productivity. Discuss the role of reproductive management and livestock breeding to increase livestock productivity. Learn about the livestock product processing industry and livestock industry waste handling, as well as livestock agribusiness and livestock product marketing / trading

25. Contextual Religious Studies (PTU2115007, 2/0)

This course studies the religion lessons that are integrated in the discipline of animal science and to apply in the form of personality and daily behavior.

26. Basic Microbiology (PTUN2112015, 1/1)

This course studies the structure and organization of prokaryotic and eukaryotic cells, taxonomy, and classification of microbes (bacteria, fungi, protozoa and viruses). This course also discusses the measurement and control of microbial growth, as well as microbial metabolism including chemotrope and phototrope. Microbial ecology including the cycles of nitrogen, carbon, sulphurs and phosphorus, as well as interactions between microbes and the environment will also be learned. In addition, the physiology and genetics of microbes will also be listed as learning lessons. This course is equipped with a practicum which includes tool introduction, sterilization, medium making, inoculation, Gram staining and microbial morphology.

27. Animal Behavior and Welfare (PTUD2112013, 2/0)

This course studies all animal behavior, the concept of animal welfare and how to measure it. The well-being of animals is an important part in the modern animal industry. Behavior is one

of the important parameters in the assessment of animal welfare. In addition, animal behavior is also the basis in the management of the animal industry.

28. Basic Biochemistry (PTN2112101, 1/1)

This course studies the structure and organization of cells (animals, plants and microbes), as well as pH and buffers. Furthermore, it also discusses the chemical structure, properties, reactions, classification, distribution and function of organic compounds (carbohydrates, lipids, proteins and nucleic acids), as well as metabolism (catabolism and anabolism) of such compounds, the role of enzymes in metabolism, as well as bioenergetics. This course is equipped with a practicum including analysis of the chemical and physical properties of organic compounds (carbohydrates, lipids and proteins), followed by the identification of these compounds in the feed and livestock products. Study of the digestive process of these compounds and analysis of digesta and enzyme activity. Analysis of the components of organic and inorganic and abnormal compounds in the urine and blood, as well as the introduction of the basis of quantitative analysis of metabolites.

29. Animal Biochemistry (PTN2113102, 1/1)

This course studies the mechanism of action of enzymes in the digestive organs, the mechanism of nutrient absorption, carbohydrate metabolism, lipids and nitrogen compounds in an integrated manner including microbial metabolism, liver, kidneys, mammary glands and reproductive organs in non-ruminants and ruminants. In addition, it also conveys the chemistry and function of hormones, antibiotics and the metabolic role of vitamins and minerals. Biochemistry Practicum of Livestock includes determination of enzyme activity, fermentation of the rumen, kidney filtration, determination of glycogen and lactate in muscles / liver, determination of metabolites in the blood, excretion of nitrogen and urinary purine derivatives, determination of levels of Ca, P and xanthofil feed and livestock products

30. Basic Animal Nutrition (PTN2113303, 2/0)

This course studies the principles of nutrition and its application in feeding to livestock. The state of animal protein consumption in Indonesia, which is still below the optimal need for growth, health, and work efficiency, is a challenge for nutritionists' livestock and other livestock experts in Indonesia to increase animal protein production and production efficiency from livestock products.

31. Animal Feed Nutrition (PTN2114304, 1/1)

This course studies the anatomy and function of each part of the digestive organs of livestock, the physiology of the digestive system of livestock, the consumption of feed and drinking water, poultry nutrients, non-ruminants and ruminants, determination of livestock needs, as well as feeding for monogastric and polygastric livestock.

32. Feed Ingredients and Ration Formulations (PTN2114405, 1/1)

This course provides the foundation of knowledge and classification of animal feed ingredients (feed) as well as the basics of ration formulation. In addition to theory, students also practice evaluating feed (Weende proximate analysis) and studying methods in ration formulation to suit the needs of livestock but still economical value.

33. Feed Technology and Fabrication (PTN2115407, 2/0)

This course studies the kinds and technologies of forage conservation, microbial application technology in feed, and the latest feed processing techniques to improve the quality of agricultural crop residues (roughages), as well as the processing of concentrate feed. In addition, it also studies feed fabrication tools / machines and storage / warehousing of feed ingredients / concentrates.

34. Fodder Forage Science (PTN2114206, 1/1)

The course studies the characteristics of the tropical environment related to the growth and productivity of fodder crops; classification, anatomy, systematic and types of grass and legume feed crops; physiology and adaptation of feed crops to their environment; reproductive system, the basics of breeding and tissue culture of feed crops.

35. Pasture Management (PTN2115208, 1/1)

The course studies the meaning of grazing fields and the factors that influence the development of grazing fields; stages of establishment, cultivation management, development and improvement of pasture; methods of measuring production, grazing and carrying capacity; optimization and analysis of pasture management efforts.

36. Introduction to Animal Production Science (PTD2113001, 3/0)

This course studies the basics of the development of animal science and industry which includes an introduction to the breeds, production processes, and production performance as well as factors affecting it. Students are directed to develop the necessary strategies for improving livestock performance.

37. Dairy Industry (PTD2114102, 2/1)

This course studies the dairy industry in Indonesia, factors affecting milk production and quality, production planning (rejuvenation, site selection, milk production and marketing), recording system, judging, the concept of good dairy practices and dairy health, evaluation and business development.

38. Meat Animal Industry (PTD2114203, 2/1)

This course studies the management of meat animals to produce quality meat and breed stock that are effective and efficient. This course will discuss the management of the meat animal industry including production systems, maintenance management, transportation and slaughter, as well as economic, social and political animal industry.

39. Poultry Industry (PTD2114304, 2/1)

This course studies environmental influences including climate, cages, feed, production facilities and breeding management to produce high production and the comfort of poultry and disease control management. Some of the results of research and development of poultry production technology are also the topic of discussion of the course.

40. Animal Breeding (PTP2115104, 1/1)

This course studies the improvement of animal productivity through its genetic quality. Animal Breeding Science is a basic course and must be taken by all students at the Faculty of Animal Science in semester 5.

41. Basic Molecular Genetic Analysis (PTP2113102, 2/0)

This course studies the application of genetic analysis to changes in the composition of genetic material (Deoxyribonucleic Acid, DNA) with the help of mathematical calculations, and statistics, which can then be used for the development of animal husbandry, for example for breeding and also the introduction of IT / Software for molecular genetic analysis.

42. Animal Physiology (PTP2112201, 1/1)

This course studies the normal functioning of animal life. The topics taught in this course are cell structure, blood, anatomy and function of the organs of the gastrointestinal tract, digestive system, absorption and metabolism as well as functions of nutrients to meet basic needs, production and reproduction. Discusses also about blood circulation and the cardiovascular system, respiration system, water balance and excretion. In addition, topics on thermoregulation, minerals, bones and joints, nerves and muscles and endocrinology are also discussed in this course

43. Animal Reproductive Science (PTP2113203, 1/1)

This course studies embryology, discusses macro and micro anatomy, the functioning of the reproductive apparatus system / organ of male and female livestock, the hypothalamus and pituitary, and hormones that affect the reproductive process, puberty, the estrus cycle. Gametogenesis, and transport gametes of cattle are also discussed in this course. The process of reproduction from fertilization (fertilization), prenatal development (intra-uterine) to the birth process, how to diagnose pregnancy, dystocia is also discussed in this course.

44. Agribusiness and Institutional Management (PTE2113003, 2/1)

This course studies the management of agribusiness and institutional systems in the animal industry. Topics discussed include business management starting from the procurement of production facilities, production planning, operation, decision making of production processes, post-production management, financing and financial management, product/service marketing, human resource management, and business institutions.

45. Introduction to Animal Science Economics, (PTE2111101, 2/0)

This course studies the basic theories of microeconomics, macroeconomics, and their application to livestock commodities. The topics studied are the theory of demand, consumer behavior, elasticity, supply theory starting from the function of production, costs, the relationship of inputs and outputs and national income as well introduction of market forms of perfect and imperfect competition, money markets and labor markets.

46. Basic Business Communication and Innovation (PTE2112202, 2/1)

This course studies how to evaluate the characteristics of various innovations in the field of animal husbandry and effective innovation communication strategies and equips students with intrapersonal and interpersonal skills, as well as negotiations in conducting business communications.

47. Abattoir and Slaughter Techniques (PTH2113101, 1/1)

This lecture material learns about the technical requirements of abattoir, abattoir equipment, the process of slaughtering livestock, handling livestock before slaughter, animal welfare, halal

cutting methods, hygiene cutting, carcass handling, grading carcass, conversion of muscles into meat, butchering/deboning, meat distribution and meat display.

48. Meat Science and Technology (PTH2114102, 1/1)

This subject studies the structure of meat and muscles, the nutritional value of meat, factors affecting the quality of meat, specific parameters of meat quality, meat quality standards meat microbiology meat reservation principles, meat cooking methods, meat fermentation, meat product ingredients, packaging and labelling, and the by-products meat industry.

49. Livestock Industry By-Product Science (PTH2115205, 1/1)

This course studies the factors that affect the quality of the skin while the cattle are still alive, the anatomy and histology of the skin, the physical and chemical properties of the skin, and skin preservation.

chemical composition, nutritional value. The course also studies the technique of separation byproduct (rendering) and processing of livestock products (skin, fat, bones, glands, blood, and internal organs) into materials feed, food, health, medicines, and renewable energy in their use for industry. This course aims to enable students to be able to explain processing techniques to produce feed ingredients, food and industrial products in order to provide high added value and does not pollute the environment, and studies methods of handling animal by product sampling for medical purposes and functional foods such as enzymes, pheromones, and hormones.

50. Animal Industry Waste Management Science (PTH2114203, 1/1)

This course studies the characteristics of animal waste, parameters of animal waste, principles and methods of handling primary waste of all sectors of the animal industry (solid, semi-solid, liquid, and gases) including feed waste, manure, as well as animal waste treatment (physical, chemical and biological). The purpose of this course is for students to be able to calculate the production of animal waste, determine the content of contamination and nutrients contained in animal waste, separate solid waste with liquid waste, treat solid and liquid waste, make simple digesters, produce gas bio, and organic fertilizers.

51. Milk Science and Technology (PTH2114304, 1/1)

The course studies the definition of milk, the physical and chemical quality of milk, the handling and examination of milk, quality standards and tests of milk counterfeiting, nutrition and chemistry of milk, hygiene and sanitation of milk, and milk processing technology. The purpose of this course is to provide insights for students about milk including the quality of basic ingredients, product products and their processing processes as well as their benefits for consumers.

52. Egg Science and Technology (PTH2115306, 1/1)

The course studies the physical structure and quality of eggs, the physicochemical properties of eggs, nutrition and chemistry of eggs, the functional properties of eggs, the technology of egg preservation and processing, the quality standards of eggs and egg products, and the benefits of eggs for the industry

B. Elective Courses

1. Introduction to Enzymology and Fermentation Technology (PTN2117109, 2/1)

This course studies Fermentation Technology which includes the basic understanding of fermentation, the role and formulation of media, sterilization processes, microbial growth and fermentation kinetics. Introduction to Enzymology studies the structure and synthesis of enzymes, as well as the kinetics of enzymes. Extraction, purification and characterization of enzymes will also be delivered. The lecture ends with an explanation of fermentation technology and enzymes, as well as their application in the field of animal science. This course is equipped with a practicum on enzyme isolation, determination of K_m and V_{max} values as well as tests of enzyme activity and influencing factors. Fermentation practice starts from microbial isolation, growth and determination of enzyme activity, as well as their application to fermentation.

2. Feed Toxicology (PTN2116115, 2/0)

This course discusses the definition of toxicology and the mechanism of toxicity. Furthermore, biotransformation talks about the metabolic reactions of toxic compounds to detoxify and increase polarity through hydrolysis and conjugation reactions. It is also discussed about the distribution, disposition in tissues and organs and the excretory system of toxic compounds. The classification, structure, chemical and metabolic properties of feed toxic compounds are also studied. The influence of feed toxic compounds on livestock performance, the process of reducing them physically, chemically and biologically, as well as their effect on animal science and the environment is also conveyed.

3. Introduction to Animal Nutrigenomics (PTN2117110, 2/0)

This lecture discusses the notion of nutrigenomics, nutrigenetics, epigenetics, and their importance in the field of animal husbandry. The flow of genetic information, gene and genome structure and the regulation of gene expression are conveyed as the basis of nutrigenomic science. It also conveyed several examples of the role of nutrition related to gene expression. Omics, including transcriptomics, proteomics and metabolomics as well as bioinformatics were also presented as a method to study gene expression in a comprehensive manner. Examples of nutrients that are influential in the regulation of gene expression that are the key to metabolism in ruminants, non-ruminants, microbes of the gastrointestinal tract as well as in the immune system and hormones as well given.

4. Quality Control and Feed Industry Management (PTN2116416, 2/1)

This course discusses the basic principles of determining the quality of feed and feed ingredients, the factors that affect it, as well as efforts that can be made to maintain the quality of feed and ingredients feed. Further discussing the production system in the feed factory starting from factory planning, procurement of feed raw materials, feed production processes up to finished feed, warehousing, and its operational management. Practicum activities are the practice of quality control analysis of feed ingredients in the laboratory and visits to the feed industry

5. Feed Technology and Fabrication Practice (PTN2117411, 0/1)

This course is designed so that students have competence in the practice of forage conservation technology, microbial application technology in feed, and the latest feed processing techniques to improve quality the yield of agricultural crop residues (roughages), as well as the practice of processing concentrate feed.



6. Feed Evaluation Technique (PTN2117417, 2/0)

This course discusses the principles and techniques used for evaluating the quality of feed carried out in the laboratory and in the field. This course will provide a basic knowledge of the concept and application of research in the field of nutrition and animal feed.

7. Production and Certification of Feed Crop Seeds (PTN2116218, 2/0)

This course studies the management and cultivation of feed crops for seed production; the process of pollination and reproduction of feed crops for seed production; how to harvest, store, pack and evaluate the quality of seeds; and the process of certification and release of seeds.

8. Introduction to Tissue Culture and Feed Plant Breeding (PTN2116219, 1/1)

This course studies tissue culture techniques and feed plant breeding and determines the right culture and breeding techniques in various feed crops.

9. Integrated Agricultural Biodynamics (PTN2117212, 2/0)

This course studies the definition of biodynamics of nutrients in integrated agriculture; models, advantages and disadvantages of integrated agricultural systems; the role of livestock and soil biota in the biodynamics of integrated agriculture and the contemporary issue of integrated agricultural systems and biodynamic agriculture.

10. Introduction to Conservation of Genetic Resources of Feed Crops (PTN2117213, 2/0)

This course studies techniques for conservation of genetic resources of feed crops, mapping the potential of feed forage for their utilization and development; phylogenetic tracing techniques of feed crops; and knowing the process of agronomic investigations and phylogenetic tracing of feed plants.

11. Poultry and Non-Ruminant Rations (PTN2117320, 2/1)

This course studies the anatomy and function of each part of the digestive organs, standard nutrient needs for poultry and non-ruminants (pigs and horses), various materials feed energy sources, proteins, vitamins, minerals and feed additives, constituents of energy source concentrates, protein source concentrates, vitamins and minerals as well as the preparation of matching rations for each physiological status poultry and non-ruminant livestock.

12. Ruminant Ration (PTN2116321, 1/1)

This course studies the nutritional needs of ruminants (cattle, buffaloes, sheep and goats) and compiles rations to meet the nutritional needs of these livestock. Nutrient fulfillment is associated with the availability of local feed with the aim of being in accordance with the area where the livestock is raised, even without leaving non-feed ingredients conventional. Nutrient fulfillment includes the needs for basic living, reproduction and production, which includes milk, meat and work production.

13. Introduction to Functional Feed (PTN2117314, 2/0)

This course studies the understanding and knowledge of the various positive benefits that can be taken or studied and the content of nutrients and active metabolite compounds from feed ingredients that are given to livestock. Various kinds of active metabolite compounds have different

mechanisms of action as a positive effort in increasing efficiency and effectiveness in increasing productivity or performance in ruminant, non-ruminant and poultry livestock.

14. Introduction to Animal Production Systems (PTD2117005, 3/0)

These subject studies the basics of animal production system development starting from various production systems (in terms of maintenance stages, intensity of *sapronak* use, utilization of sources feed, and the complexity of the business), the use of technology, stakeholders and their relationship patterns, as well as aspects (economic, social, and environmental) determining the progress of the system animal production. Students are directed to master a solid foundation for developing a sustainable animal production system.

15. The Dairy Industry (PTD2117106, 2/1)

The Post-Harvest and Dairy Industry courses are complementary to the learning in the field of dairy animals that has been given in the previous semester, namely Dairy Science and Dairy Industry. The subject matter of the course focuses on post-harvest and dairy industries developed-based on raw materials for milk of various dairy animals. In this course, knowledge is discussed: Good Milking Practices; Hygienic Milk Handling; Milk Composition, Microbes, Contamination and off flavor; Special case: Mastitis; Milk Harvesting and collection; Milk Collection and transportation; HACCP in Dairy; Milk Payment system; Milk Marketing; Dairy Cooperatives; Milk Industries (Physical manufacturing, Fermented Milk, and Cheese).

16. Miscellaneous Dairy Industry (PTD2116109, 2/1)

This course studies the knowledge that underlies the management and production of milk from dairy livestock other than cows (goats, sheep, buffaloes and horses). The subject matter includes the role of dairy livestock other than cattle in the provision of food in the world, nations of dairy livestock other than cattle that are commonly milked (goats, sheep, buffaloes and horses), anatomy, histology and physiology of the mammary glands, livestock management (care of offspring, virgins, bunting, lactation and dry cows), milking, feed, reproduction, and factors affecting milk production.

17. Draught and Sports Animal Industry (PTD2116210, 2/1)

This course discusses the management of draught and sport animal businesses including various draught and sport animals, equestrian, housing, equipment and facilities for job livestock training, selection of will, basic training, occupational livestock training, feed management, maintenance, business planning and development, organization, policy and regulation.

18. Companion and Experimental Animal Industry (PTD2117207, 2/1)

This course discusses various companion animals and experiments and the management of their industries ranging from maintenance, contests, to sales.

19. Miscellaneous Poultry Industry (PTD2117308, 2/1)

This course studies the management and management of various poultry livestock. Some of the types and nations of poultry to be studied are: geese, guinea fowls, ducks, turkeys, pigeons and quails. These six types of poultry nations will be discussed, ranging from origins, nations, production traits, breeding, maintenance management, feed needs and other environmental factors that support its development.

20. Poultry Breeding and Hatching Industry (PTD2116311, 2/1)

This course will study the process of forming poultry breeds from local livestock to commercial livestock. Based on Mendel's theory in genetics, it was studied about the potential and inheritance of traits possessed by chickens genetically. The influence of the environment as a factor of opportunity is used as a means to study the superior properties of egg and meat production. The introduction of qualitative and quantitative trait inheritance and the estimation of the accompanying genetic parameters are discussed in this course, so that students understand that the emergence of traits not only can be improved through environmental improvement, but must first be based on the improvement of genetic quality through trait inheritance. The concept of marriage to find out the genetic analysis of elders to their offspring is used as the basis for estimating the values of genetic parameters of each trait that has high economic significance.

21. Basic Industrial Engineering of Ruminant and Non-Ruminant Animal Breeding (PTP2116105, 2/1)

This course studies the needs and availability of livestock breeds in an area as well as animal breeding management including planning, organizing, implementing, monitoring, evaluating, and its application in industry on various livestock commodities.

22. Basic of Livestock Assessment and Evaluation (PTP2116108, 3/0)

This course studies the methods and methods of assessing exterior performance, quantitative properties (body weight and body measures), and assessment of carcass performance

23. Basic Practicum of Molecular Genetic Analysis (PTP2117106, 0/1)

This course studies the use of IT/software for molecular genetic analysis. Molecular Genetics Practicum is a continuation and complement of the Molecular Genetics Analysis course so that this course can only be taken by students who are taking and or have passed the Molecular Genetics Analysis course.

24. Reproductive Technology (PTP2117207, 2/1)

This course studies Artificial Insemination (IB) which includes the history of IB in Indonesia, sperm storage and examination, sperm dilution and freezing, insemination techniques, recording and research IB results. Estrus synchronization includes the methods and hormones used, multiple ovulation and embryo transfer (MOET) and in vitro fertilization (IVF) as well as the latest developments in livestock reproductive biotechnology are also discussed in this course.

25. Infertility and Sterility (PTP2116209, 2/0)

This course studies the failure of the reproductive process of male and female animals, the failure of artificial insemination, then the factors affecting the failure, as well as system abnormalities reproduction of a genetic nature. It also discusses various diseases caused by bacteria, viruses, protozoa, and metabolism that affect the reproductive process.

26. Animal Environmental Science (PTP2116210, 2/0)

This course studies the environmental aspects that are suitable for livestock, related to climates and microclimates. In addition, this course also discusses elements of the external livestock environment such as: physical, chemical, biological and social environment to the appearance of

livestock; includes the appearance of the system/function of both one system/function as well as its interactions as well as the appearance of its reproduction.

27. Instrumentation and Analysis of Socioeconomic Data (PTE2117004, 1/1)

This course studies methods of taking socioeconomic data qualitatively and quantitatively including surveys, interviews, FGDs, questionnaire preparation, reliability tests, validity tests, and analytical techniques socioeconomic data.

28. Consumer Behavior (PTE2116108, 2/0)

This course studies various factors both external and internal consumers and the decision-making process as well as studying the role of these factors in making decisions on the purchase and use of products produced by the livestock industry.

29. Livestock Project Analysis (PTE2116109, 1/1)

This course studies the assessment of the feasibility of projects related to the livestock industry and decision-making on project implementation activities. The topics studied are the project cycle, formulating the project, the identification and assessment of the costs and benefits of the project, the value of money according to time and the analysis of financial income and the project economy in the framework of decision-making to implement the project in accordance with the development goals of the livestock sub-sector. The need for skills that students must have to carry out project analysis and evaluation, so that the courses are equipped with practicum. The course also equips students with the skills to conduct project analysis and evaluation.

30. Rural Development (PTE2117205, 2/0)

The course studies the notion of rural development, the relationship between rural and agricultural development, the characteristics of rural areas in Indonesia, the potential of rural areas in livestock development and development agriculture, as well as sustainability in rural development.

31. Psychology of the World of Work (PTE2116210, 2/0)

This course studies problems in the field of livestock industry and in the world of work, especially about leadership, organization, employment and entrepreneurship in terms of psychological aspects.

32. Development Counseling (PTE2116207, 1/1)

This course studies the concept of counseling as a non-formal educational process and the stages in designing an extension activity from planning to implementing an extension program. Students also explore strategies, both methods and techniques in the implementation of extension programs. An understanding of effective communication is also learned in lecture materials by students so that the counseling goals that have been formulated can be achieved in accordance with expectations.

33. Industrial Economics (PTE2117106, 2/0)

This course studies industrial organization theory, and analyzes empirical evidence regarding the strategy, behavior and performance of companies and industries. The topics studied are industry organizations related to competition, strategy, and policy. Theoretical understanding for

the development of research in the field of animal husbandry economics such as game-theory, industrial organization theory, company / business unit theory and cost analysis. Each discussion is associated with strategic management that is relevant to the industrial economy from a business or management point of view.

34. Food Safety of Livestock Products (PTH2116010, 2/0)

Discusses food poisoning, damage and microbiological handling of food, sanitation, quality management, ISO applications, hazard analysis and critical control points (HACCP), and their implementation in the processing of food from livestock and Government regulation on food safety

35. Nutritional Food from Livestock Products (PTH2117011, 2/0)

Discusses chemical and nutritional aspects (water, protein, carbohydrates, fats, vitamins and minerals) in livestock products, which include aspects of digesti, absorbs, transport and metabolism of nutrients, malnutrition, food consumption and needs, as well as nutritional adequacy, as well as the relationship between the processing process and nutritional value.

36. Poultry Meat Processing (PTH2117107, 2/1)

Discusses poultry processing technology, poultry meat preservation and distribution, poultry meat microbiology, nutritional value of poultry meat and poultry meat products, the effect of processing on quality poultry meat products, functional characteristics of poultry meat products, and advanced poultry meat processing.

37. Leather Science, Design, and Technology (PTH2116212, 2/1)

This lecture material includes knowledge of skin anatomy and histology, physical and chemical properties of the skin, collagen hydrolysis, collagen chemistry, skin preservation, selective assessment of ingredients raw leather, carry out the beam house process for skin preservation, knowledge of tanning materials, tanning process, kinds of tanning leather (mineral samak, vegetable samak, aldehyde samak, and oil samak), finishing process, SNI testing of samak leather quality, clean production, and utilization of tanning waste. Learning aims to enable students to master environmentally friendly skin preservation and tanning techniques, be able to design samak leather products, so that the products produced can be compete in the global market.

38. Participating Technology (PTH2116213, 2/0)

This course studies the sources of livestock follow-up results both from animal husbandry and in the process of post-harvest processing of livestock products and benefits for biotechnology and food purposes functional (edible) into leather cracker products, marshmallows mechanically and enzymatically, as well as learn more about the processing of non-edible products into glue products, gelatin, MBM (carcass meal), feather meal, bone meal, blood meal, bating agent, tallow and lard. The general purpose of learning is that students are able to know its use for food, feed, health, and medicine. Students will also be able to make efforts to improve the processing of residual results from participating in the on and off farm livestock industry.

39. Livestock Industry Waste Handling Technology (PTH2117208, 2/0)

This course studies the handling of livestock industry waste which includes hatchery waste, tanning waste, milk processing industrial waste, and RPA / RPH waste that is safe for the environment ecofriendly oriented. The lecture material discusses the role of microbes in the process of handling waste biologically. This course also studies the role of microbes for the bioremediation and biosorption of toxic compounds and heavy metals. This course aims to enable students to master knowledge about the role of microbes for waste handling and environmental bioremediation polluted by toxic compounds and heavy metals. Students are able to breed microbes that are often used in the management of livestock industry waste handling.

40. Microbiology of Livestock Food Product (PTH2117009, 2/1)

Microbiology of Livestock Food Products explores milk, eggs, and meat topics. This course covers numerous subjects such as the scope of microbiology in livestock products, factors that affect the growth of microorganisms, isolation and identification of microbes, food microbial ecology, lactic acid bacteria and probiotics, the microbiology of fresh milk and processed milk, the microbiology of eggs and processed eggs, post-harvest microbiology of meat and processed meat, detection of pathogens in animal products, and microbiological control of livestock products.

41. Enzyme of Livestock Food Product (PTH2116014, 2/0)

In this course, students will study the general characteristics of enzymes such as specificity, the factors affecting the activity of enzymes, enzymes kinetics, isolation and purification of enzymes, characteristic of natural enzymes in livestock feed, and the enzymes that plays role in the processing, especially those on livestock food products.

42. Basic of Food Processing of Livestock (PTH2116315, 2/0)

This course discusses the stages of food processes such as drying, heating, freezing, mixing and fermentation.

43. Animal Health Science (PTUD2116022, 2/0)

This course studies the factors affecting the health of cattle such as climate, air, water, soil, cages, feeds, care, disease recognition and prevention, sanitation and vaccination.

44. Introduction to Biotechnology (Introduction to Biotechnology, 2/0)

This course studies various aspects such as the general principle of biotechnology for livestock, the basic principle of DNA technology, and recent issues in the use of biotechnology. Students will learn the basic knowledge of biotechnology that encompass various topics such as the basic definition of genetics, the basic dogma of biology, biological system, and the basic principle of recombinant and transgenic DNA, to give them an understanding of the application of biotechnology for livestock. These include feed and nutrition, feed product, breeding and reproduction, environment and bioinformatics.

45. Livestock Politics (PTUE2116025, 2/0)

This course studies the laws and policies revolving around livestock and food, current issues that develop around global animal development, study the problems and the alternative solutions for the industry and traditional farms.

46. Beekeeping/Apiculture (PTUN2117031, 1/1)

In this course, students will learn the types of honeys and the biological honeys. In addition, they will also learn the management for farming honey, and the feed and honey production.

47. Halal Production System for Livestock Products (PTUH2116029, 2/0)

This course studies the Halal concepts, especially in the context of livestock products and their derivatives. Students are expected to understand the system of the halal industry in both Indonesia and the global world. They will learn how to provide halal livestock products such as meat, eggs, and milk, their derivatives, and by-products. Going further, students will learn on how to design a halal business system, the packaging concepts, labels, and halal certifications.

48. Basic Programming and Farm Instrumentation (PTUD2117021, 2/0)

This course studies the basics on the use of technology, Topology for Hardware and Software, coding and programming (PHP and HTML), big data processing, data presentation, If This Then That Technology (IFTTT), hardware and software to support IFTTT, and the application of IFTTT for smart farming. Students will also learn the design and drawing of engineering machinery, mechanical engineering, along with the mechanization of numerous aspects such as feed, cultivation, processing, waste processing, and the cold chain. Also, they will study the basic electronics, electricity, electrical installation, electric motors, sensors, timer, and their use for this sector.

49. Experiment Design (PTUP2116032, 2/0)

This course studies the basics and backgrounds behind the use of experimental design in research projects. It explains the various efforts to lessen errors by choosing the right experiment design. Students will learn how to use the Completely Randomized Design, Mean Comparison Test (smallest significant difference, Duncan, Tukey, and Mean Comparison with Control), Completely Randomized Block, Latin Square and Factorial Experiment, and the analysis and interpretation of the results.

50. Research Method (PTU2117020, 2/0)

This course covers materials to prepare students for either research or undergraduate paper. However, this course is given in parallel depending on the student's specialization.

51. Marketing for Livestock Products (PTUE2116026, 2/0)

This course studies the basic concept of marketing so that students know how to maintain a mutual relationship with customers. The topics range from marketing environment, consumer market, business market, segmentation, determining the target market, positioning the commodity/non-commodity products/services, pricing strategy, marketing channels, wholesaler and retailer, marketing communication, and ethics.

52. Animal-based Tourism (PTUE2116028, 2/0)

This course studies the utilization of animals for educational purposes and/or recreation by introducing content around the animal's welfare and health.

53. Livestock Techno and Sociopreneur (PTUE2117024, 2/0)

This course studies the concept of entrepreneurship, creative thinking, understanding innovation, ethics and social responsibility, developing business ideas, growing the business motivation, preparing business plans, handling risks, strategy and growth management, and understanding family business. Students will pitch their business ideas, create business plans, and conduct Student Entrepreneurship Expo (SEE).

54. Livestock Industry Management (PTUE2116027, 2/0)

This course studies the management of the livestock industry, mainly in terms of productions that encompass aspects like management, processes, and its costs. Students will also learn input management, plans the input requirements on livestock production, production management post-harvest, product development, supply chain management, inventory, the solutions for issues in the livestock industry, decision-making, and business analysis models. Using problem-based learning, students will study the cases in this industry.

55. Swallow and Silkworm Farming (PTUD2116023, 2/0)

This course studies the upstream-to-downstream management of swallow and silkworm farming.

56. Recognition for Winners of Competitions (1-2 credits) (PTU2110034, 0/2)

A recognition to winners of competitions for their achievements that make a name for the Faculty of Animal Sciences in national and international students competition.

57. Recognition for Active Participation of Seminars (1-2 credits) (PTU2110033, 0/2)

A recognition to active participants of seminars that make a name for the Faculty of Animal Sciences in national and international scientific seminars.

58. MBKM Internship (n-SKS) (PTU2110039, 0/20)

The internship program involved the students to feel real-life working in the industry, government institutions, international institutions, non-governmental organizations (NGOs), financial institutions, cooperations, and many other institutions as long as it is relevant to the livestock industry. The internship activities focus on developing industrial insight, implementing theory, and practical experience learned in lectures. The internship aims to provide a reflection on the theories that have been learned in every lecture, collect experience by applying general and special skills in the real workforce environment, and internalize professional attitudes and work culture. If possible, students can use their internship involvement to carry out some stages of their final project writing.

59. MBKM Rural/Urban Empowerment Project (n-SKS) (PTU2110035, 0/20)

This activity aims to provide opportunities for students to participate in community development and empowerment in rural/urban areas. This activity is carried out in groups by involving students across study programs, departments, and faculties as members. The benefit of this program is that students can understand the issues of communities in rural areas and participate in designing programs and activities to address these issues. This activity can take up to 20 credits and it can be converted to courses according to the 2021 curriculum design.

60. MBKM Student Exchange (n-SKS) (PTU2110040, 0/20)

Student Exchange is learning and lectures attended by students and held outside the Animal Husbandry Science and Industry Study Program (PS-IIP) to support the fulfillment of Learning Outcomes (LO) of the Study Program. The courses taken are courses that have been stated in the study program curriculum structure, to enrich the LO.

61. MBKM Research (n-SKS) (PTU2110036, 0/20)

This research program is developed for students that are interested in research work and non-paper research. This activity is expected to give students a research experience, under the supervision of lecturers/researchers with the end goal to create a research paper which may support the final thesis paper and be published, as the end outcome for this program. Study program can partner with research institutions in internal UGM (laboratory, research center, or study center) and external UGM (research institutions, industry, and others outside UGM that are considered strategic and in line with the vision and mission of faculty/department) according to the topics chosen by students.

62. MBKM Entrepreneurship (n-SKS) (PTU2110041, 0/20)

Entrepreneurial activities include business embryos, business incubation for profit (commercial) and non-profit (social) purposes on products and services in the livestock industry and other related industries, and can be collaborated. Entrepreneurs in the livestock sector have great opportunities with the development of innovation and technology that can be implemented in the form of business incubation programs. This activity is a forum for students to develop their own capacity for entrepreneurship in livestock.

63. MBKM Study/Independent Project (n-SKS) (PTU2110037, 0/20)

This is an activity that students do individually or in groups with other students to create innovative works (whether they are not contested or those that are contested in National/International competitions). This activity can be used as a reinforcement or a substitute for courses that must be taken. The equivalence for independent study/project activities into courses is calculated based on the student's contribution and proven role in activities under the coordination of the Advisor Lecturers. Independent projects can also be carried out in collaboration with companies, groups of farmers, or other organizations.

64. MBKM Humanitarian Project (n-SKS) (PTU2110042, 0/20)

Activities in humanitarian projects include providing assistance or aid for victims of natural disasters including earthquakes, floods, tsunamis, droughts, eruptions, etc., and non-natural disasters like pandemics. This activity is intended for the emergency response period, increasing community preparedness, mitigation, or reducing the risk of various forms of disasters. Students participate in humanitarian projects that are jointly organized with relevant partners and in collaboration with the Faculty of Animal Science UGM.

65. MBKM Teaching in Education Units (n-SKS) (PTU2110038, 0/20)

Teaching in educational units is part of the Merdeka Campus program which aims to provide opportunities for students to learn and develop themselves through activities outside the lecture class. Here, students will teach high school or vocational high school students. The selected

schools are mainly related to agriculture-animal sciences. In this program, students partner with teachers in developing engaging literacy and numeracy learning. Through this program, students will hone their social skills and character, especially creativity, leadership, and interpersonal skills.

66. MBKM Defend The Country (n-SKS) (PTU2110043, 0/20)

The Ministry of Education and Culture (Kemendikbud) offers a State Defense program for university students called Merdeka Learning. This program can be taken for 1 semester and the score can be entered into credits. Although different from military education, this activity is made similar to military activity, with training in discipline, agility, and much more.

67. Courses taken in other study programs

Providing recognition for students taking courses in other study programs through credit earning programs or other programs.



APPENDIX

Photo by artem-beliaikin on Unsplash

Appendix 1. Management of the Faculty of Animal Science UGM

| Period | Name | Position |
|-------------|--|---|
| 1969 - 1971 | drh. Soepardjo | Dean |
| | drh. Soeharto Prawirokusumo | Secretary |
| 1971 - 1973 | drh. Soekanto Lebdosukojo, M.Sc. | Dean |
| | drh. Soeharto Prawirokusumo | Secretary |
| 1973 - 1975 | drh. Harmadji | Dean |
| | drh. Soekoharto | Secretary |
| 1975 - 1977 | drh. Harmadji | Dean |
| | drh. Soekoharto | Secretary |
| 1977 - 1979 | drh. Soedomo Reksohadiprojo, M.Sc. | Dean |
| | drh. Soemitro Djojowidagdo | Secretary |
| 1979 - 1982 | drh. Soedomo Reksohadiprojo, M.Sc. | Dean |
| | drh. Soeharto Prawirokusumo, M.Sc., Ph.D. | Assistant Dean I |
| | drh. Soekoharto | Assistant Dean II |
| | Drs. Nasroedin, M.Sc. | Assistant Dean III |
| 1982 – 1985 | drh. Soeharto Prawirokusumo, M.Sc., Ph.D. | Dean |
| | Soenarjo Keman, M.Sc., Ph. D. | Assistant Dean I |
| | drh. Wartomo Hardjosubroto, MSA. | Assistant Dean II |
| | drs. Nasroedin, M.Sc. | Assistant Dean III |
| 1985 – 1988 | drh. Soeharto Prawirokusumo, M.Sc., Ph.D. | Dean |
| | Soenarjo Keman, M.Sc., Ph. D. | Assistant Dean I |
| | Drs. Nasroedin, M.Sc. | Assistant Dean II |
| | drh. Gamblong Sudiono, SU. | Assistant Dean III |
| 1988 – 1991 | Soenarjo Keman, M.Sc., Ph. D. | Dean |
| | Ir. Krishna Agung Santosa, M.Sc., Ph. D. | Assistant Dean I |
| | drh. Sunardi, M.Sc. | Assistant Dean II |
| | Ir. Sugeng Prihadi, SU. | Assistant Dean III |
| 1991 – 1994 | Prof. Dr. drh. Soemitro Djojowidagdo | Dean |
| | Ir. Krishna Agung Santosa, M.Sc., Ph. D. | Assistant Dean I |
| | drh. Sunardi, M.Sc. | Assistant Dean II |
| | Ir. Subur Priyono Sasmito Budhi, Ph. D. | Assistant Dean III |
| 1994 – 1997 | Ir. Krishna Agung Santosa, M.Sc., Ph. D. | Dean |
| | Ir. Hari Hartadi, M.Sc., Ph. D. | Assistant Dean I |
| | Ir. Made Arya Wiguna, SU. | Assistant Dean II |
| | Dr. Ir. Tri Yuwanta, SU., DEA. | Assistant Dean III |
| 1997 – 2000 | Ir. Krishna Agung Santosa, M.Sc., Ph. D. | Dean |
| | Ir. Hari Hartadi, M.Sc., Ph. D. | Assistant Dean I |
| | Ir. Made Arya Wiguna, SU. | Assistant Dean II |
| | Dr. Ir. Tri Yuwanta, SU., DEA. | Assistant Dean III |
| 2001 – 2003 | Prof. Ir. Zaenal Bachruddin, M.Sc., Ph.D. | Dean |
| 2003 – 2004 | Ir. Ali Wibowo, M.Sc., Ph.D. | Dean |
| 2001 – 2004 | Ir. Kustono, M.Sc., Ph.D. Dr. Ir. Supadmo, MS. | Vice Dean for Academic |
| | Dr. Ir. Budi Prasetyo Wb., DESS., DEA. | Vice Dean for General Administration, Vice Dean for Student Affairs |
| 2004 | Ir. Hasyim Mulyadi, SU. | Vice Dean for Student Affairs |
| 2004 – 2008 | Prof. Dr. Ir. Tri Yuwanta, SU., DEA. | Dean |
| | Prof. Dr. Ir. Zuprizal, DEA. | Vice Dean for Academic and Research |

| | | |
|-------------|---|--|
| | Ir. Heru Sasongko, MP. | Vice Dean for Finance, Administration, and HR Development |
| | Dr. Ir. Ali Agus, DAA., DEA. | Vice Dean for Student Affairs, Alumni, and Cooperation |
| 2008 – 2012 | Prof. Dr. Ir. Tri Yuwanta, SU., DEA. | Dean |
| | Dr. Ir. Adiarto, M.Sc. | Vice Dean for Academic, Research, and Community Service |
| | Dr. Ir. Suci Paramitasari Syahlani, MM. | Vice Dean for Finance, Administration, and HR Development |
| | Ir. Edi Suryanto, M.Sc., Ph.D. | Vice Dean for Student Affairs, Alumni, and Cooperation |
| 2012 - 2016 | Prof. Dr. Ir. Ali Agus, DAA., DEA. | Dean |
| | Ir. Budi Guntoro, S.Pt., M.Sc., Ph.D. | Vice Dean for Academic and Student Affairs |
| | Prof. Ir. I Gede Suparta Budisatria, M.Sc., Ph.D. | Vice Dean for Research, Community Service, and Cooperation |
| | Prof. Dr. Ir. Zuprizal, DEA. | Vice Dean for Finance, Assets, and Human Resources |
| 2016 - 2021 | Prof. Dr. Ir. Ali Agus, DAA., DEA., IPU., ASEAN Eng. | Dean |
| | Prof. Ir. Budi Guntoro, S.Pt., M.Sc., Ph.D., IPU., ASEAN Eng. | Vice Dean for Academic and Student Affairs |
| | Bambang Suwignyo, S.Pt., MP., Ph.D., ASEAN Eng. | Vice Dean for Research, Community Service, and Cooperation |
| | Prof. Ir. I Gede Suparta Budisatria, M.Sc., Ph.D., IPU., ASEAN Eng. | Vice Dean for Finance, Assets, and Human Resources |
| 2021-2026 | Prof. Ir. I Gede Suparta Budisatria, M.Sc., Ph.D., IPU., ASEAN Eng. (Passed away : 4 November 2021) | Dean |
| | Prof. Ir. Budi Guntoro, S.Pt., M.Sc., Ph.D., IPU., ASEAN Eng. | Vice Dean for Academic and Student Affairs |
| | Bambang Suwignyo, S.Pt., MP., Ph.D., ASEAN Eng. | Vice Dean for Research, Community Service, and Cooperation |
| 2021-2026 | Prof. Ir. Budi Guntoro, S.Pt., M.Sc., Ph.D., IPU., ASEAN Eng. | Dean |
| | Ir. R. Ahmad Romadhoni Surya Putra, S.Pt., M.Sc., Ph.D., IPM., ASEAN Eng. | Vice Dean for Academic and Student Affairs |
| | Ir. Andriyani Astuti, S.Pt., M.Sc., Ph.D., IPM. | Vice Dean for Finance, Assets, and Human Resources |
| | Prof. Ir. Yuny Erwanto, S.Pt., M.P., Ph.D., IPM. | Vice Dean for Research, Community Service, and Cooperation |

Appendix 2. Curriculum of 2021

A. Compulsory Courses

| No | Courses Code | Course Name | Credits | Status | Semester | Total |
|----|--------------|--|---------|--------|----------|-------|
| 1 | UNU2111000 | Islamic Education | 2/0 | C | I | |
| 2 | UNU2111006 | Pancasila | 2/0 | C | I | |
| 3 | PTU2111001 | Bahasa Indonesia | 2/0 | C | I | |
| 4 | PTU2111002 | General Biology | 2/1 | C | I | |
| 5 | PTU2111003 | Basic Chemistry | 2/1 | C | I | |
| 6 | PTU2111004 | Mathematics | 2/0 | C | I | |
| 7 | PTUD2111012 | Introduction to Animal Science and Industry | 2/0 | C | I | |
| 8 | PTE2111101 | Introduction to Livestock Economics | 2/0 | C | I | |
| 9 | PTUP2111016 | Anatomy and Histology | 2/1 | C | I | 18/3 |
| 10 | PTU2112005 | Basic of Physics | 2/1 | C | II | |
| 11 | UNU2112007 | Civic education | 2/0 | C | II | |
| 12 | PTU2112006 | English | 2/0 | C | II | |
| 13 | PTUE2112014 | Basic of Management and Entrepreneurship | 2/0 | C | II | |
| 14 | PTUP2112017 | Basic of Genetics | 2/0 | C | II | |
| 15 | PTUN2112015 | Basic of Microbiology | 1/1 | C | II | |
| 16 | PTUD2112013 | Animal Behavior and Welfare | 2/0 | C | II | |
| 17 | PTN2112101 | Basic of Biochemistry | 1/1 | C | II | |
| 18 | PTP2112201 | Animal Physiology | 1/1 | C | II | |
| 19 | PTE2112202 | Basic of Business Communication and Innovation | 2/1 | C | II | 17/5 |
| 20 | PTUP2113018 | Introduction to Statistics and Experimental Design | 3/0 | C | III | |
| 21 | PTN2113102 | Animal Biochemistry | 1/1 | C | III | |
| 22 | PTN2113303 | Basic of Animal Nutrition | 2/0 | C | III | |
| 23 | PTD2113001 | Introduction to Livestock Production Science | 3/0 | C | III | |
| 24 | PTP2113102 | Basic Molecular Genetic Analysis | 2/0 | C | III | |
| 25 | PTP2113203 | Animal Reproduction | 1/1 | C | III | |
| 26 | PTE2113003 | Agribusiness and institutional Management | 2/1 | C | III | |
| 27 | PTH2113101 | Abattoir and Slaughtering Techniques | 1/1 | C | III | |
| 28 | PTUP2113019 | Research Methodology | 2/0 | C | III | 17/4 |
| 29 | PTN2114304 | Animal Feed and Nutrition | 1/1 | C | IV | |
| 30 | PTN2114405 | Feed and Ration Formulation | 1/1 | C | IV | |
| 31 | PTN2114206 | Forage Science | 1/1 | C | IV | |
| 32 | PTD2114102 | Dairy Animal Industry | 2/1 | C | IV | |
| 33 | PTD2114203 | Meat Animal Industry | 2/1 | C | IV | |
| 34 | PTD2114304 | Poultry Industry | 2/1 | C | IV | |
| 35 | PTH2114102 | Meat Science and Technology | 1/1 | C | IV | |
| 36 | PTH2114203 | Industrial Animal Waste Handling | 1/1 | C | IV | |
| 37 | PTH2114304 | Milk Science and Technology | 1/1 | C | IV | 12/9 |
| 38 | PTU2115007 | Contextual Religious Studies | 2/0 | C | V | |

| | | | | | | |
|------------------------|------------|-----------------------------------|-----|---|------|-------|
| 39 | PTN2115407 | Technology and Feed Industry | 2/0 | C | V | |
| 40 | PTN2115208 | Pastura management | 1/1 | C | V | |
| 41 | PTP2115104 | Animal Breeding | 1/1 | C | V | |
| 42 | PTH2115205 | Industrial Animal By-Products | 1/1 | C | V | |
| 43 | PTH2115306 | Egg Sciences and Technology | 1/1 | C | V | 8/4 |
| 44 | UNU222001 | Student Community Service Program | 0/4 | C | VI | 0/4 |
| 45 | PTU2117009 | Seminar | 0/1 | C | VII | |
| 46 | PTU2117010 | Practical Fieldwork | 0/2 | C | VII | 0/3 |
| 47 | PTU2118011 | Undergraduate Thesis | 0/4 | C | VIII | |
| | | | | | | 72/35 |
| Semester Credit Amount | | | | | | 107 |

B. Elective Courses

| No | Courses Code | Course Name | SKS | Status | Semester | Total |
|----|--------------|--|-----|--------|----------|-------|
| 1 | PTN2117109 | Introduction to Enzymology and Fermentation Technology | 2/1 | E | Odd | |
| 2 | PTN2117110 | Introduction to Livestock Nutrigenomics | 2/0 | E | Odd | |
| 3 | PTN2117411 | Practical Field Work for Technology and Feed Industry | 0/1 | E | Odd | |
| 4 | PTN2117417 | Feed Evaluation Techniques | 2/0 | E | Odd | |
| 5 | PTN2117212 | Biodynamics of Integrated Farming | 2/0 | E | Odd | |
| 6 | PTN2117213 | Introduction to Conservation of Genetic Resources of Feed Plants | 2/0 | E | Odd | |
| 7 | PTN2117314 | Introduction to Functional Feed | 2/0 | E | Odd | |
| 8 | PTN2117320 | Poultry and Non-Ruminant Rations | 2/1 | E | Odd | |
| 9 | PTD2117005 | Introduction to Animal Production System | 3/0 | E | Odd | |
| 10 | PTD2117106 | Dairy and Milk Industry | 2/1 | E | Odd | |
| 11 | PTD2117207 | Companion and Experimental Animals Industry | 2/1 | E | Odd | |
| 12 | PTD2117308 | Miscellaneous Poultry Industry | 2/1 | E | Odd | |
| 13 | PTP2117106 | Basic Practicum for Molecular Genetic Analysis | 0/1 | E | Odd | |
| 14 | PTP2117207 | Reproductive Technology | 2/1 | E | Odd | |
| 15 | PTE2117004 | Socio-Economic Data Instrumentation and Analysis | 1/1 | E | Odd | |
| 16 | PTE2117205 | Rural Development | 2/0 | E | Odd | |
| 17 | PTE2117106 | Industrial Economy | 2/0 | E | Odd | |
| 18 | PTH2117107 | Poultry Meat Processing | 2/1 | E | Odd | |
| 19 | PTH2117208 | Technology for Handling Industrial Animal Waste | 2/0 | E | Odd | |
| 20 | PTH2117009 | Animal Products Microbiology | 2/1 | E | Odd | |
| 21 | PTH2117011 | Nutritional Food Products | 2/0 | E | Odd | |
| 22 | PTUN2117030 | Introduction to Biotechnology | 2/0 | E | Odd | |
| 23 | PTUN2117031 | Honey Bee/Apiculture | 1/1 | E | Odd | |
| 24 | PTUD2117021 | Basic Programming and Farm Instrumentation | 2/0 | E | Odd | |
| 25 | PTUE2117024 | Animal Technology and Social Entrepreneurship | 2/0 | E | Odd | |

| | | | | | | |
|----|-------------|---|-----|---|----------|--|
| 26 | PTU2117020 | Research Techniques | 2/0 | E | Odd | |
| 27 | PTE2116207 | Development Counseling | 1/1 | E | Odd | |
| 28 | PTN2116115 | Toxicology of Feed | 2/0 | E | Even | |
| 29 | PTN2116416 | Quality Control and Feed Industry Management | 2/1 | E | Even | |
| 30 | PTN2116218 | Forage Seeds Production and Certification | 2/0 | E | Even | |
| 31 | PTN2116219 | Introduction to Tissue Culture and Breeding of Feed Plants | 1/1 | E | Even | |
| 32 | PTN2116321 | Ruminant Rations | 1/1 | E | Even | |
| 33 | PTD2116109 | Non Bovine Dairy Animals | 2/1 | E | Even | |
| 34 | PTD2116210 | Draught and Sport Animals Industry | 2/1 | E | Even | |
| 35 | PTD2116311 | Poultry Nursery and Hattings Industry | 2/1 | E | Even | |
| 36 | PTP2116108 | Basic Assessment of Livestock and Its Evaluation | 3/0 | E | Even | |
| 37 | PTP2116209 | Infertility and Sterility | 2/0 | E | Even | |
| 38 | PTP2116210 | Animal Environmental Sciences | 2/0 | E | Even | |
| 39 | PTP2116105 | Basic of Industrial Engineering for Ruminant and Non - Ruminant Nursery | 2/1 | E | Even | |
| 40 | PTE2116108 | Consumer Behavior | 2/0 | E | Even | |
| 41 | PTE2116109 | Analysis of Animal Science Project | 1/1 | E | Even | |
| 42 | PTE2116210 | Psychology of the World of Work | 2/0 | E | Even | |
| 43 | PTH2116010 | Food Safety of Livestock Products | 2/0 | E | Even | |
| 44 | PTH2116212 | Science, Design, and Leather Technology | 2/1 | E | Even | |
| 45 | PTH2116213 | Animal By-Products Technology | 2/0 | E | Even | |
| 46 | PTH2116014 | Livestock Food Enzymes | 2/0 | E | Even | |
| 47 | PTH2116315 | Basic Food Processing of Livestock Products | 2/0 | E | Even | |
| 48 | PTUD2116022 | Animal Health Sciences | 2/0 | E | Even | |
| 49 | PTUE2116025 | Livestock Politics | 2/0 | E | Even | |
| 50 | PTUH2116029 | Halal Production System of Livestock Products | 2/0 | E | Even | |
| 51 | PTUE2116026 | Marketing of Livestock Products | 2/0 | E | Even | |
| 52 | PTUE2116027 | Livestock Industry Management | 2/0 | E | Even | |
| 53 | PTUE2116028 | Animal-based Tourism | 2/0 | E | Even | |
| 54 | PTUD2116023 | Swallow and silkworm cultivation/sericulture | 2/0 | E | Even | |
| 55 | PTUP2116032 | Experimental design | 2/0 | E | Even | |
| 56 | PTU2110033 | Recognition for Active Participation of Seminars (1-2 credits)* | | E | Odd/Even | |
| 57 | PTU2110034 | Recognition for Winners of Competition (1-2 credits)* | | E | Odd/Even | |
| 58 | PTU2110035 | MBKM Rural Development Project (N-SKS) | | E | Odd/Even | |
| 59 | PTU2110036 | MBKM Research (N-SKS) ** | | E | Odd/Even | |
| 60 | PTU2110037 | MBKM Study/Independent Project (N-SKS) ** | | E | Odd/Even | |
| 61 | PTU2110038 | MBKM Teaching in Education Unit (N-SKS) ** | | E | Odd/Even | |
| 62 | PTU2110039 | MBKM Internship (N-Sks) ** | | E | Odd/Even | |
| 63 | PTU2110040 | MBKM Student Exchange (N-SKS) ** | | E | Odd/Even | |
| 64 | PTU2110041 | MBKM Entrepreneurial Activities (N-SKS) ** | | E | Odd/Even | |

| | | | | | | |
|----|------------|---|--|---|----------|--------|
| 65 | PTU2110042 | MBKM Humanitarian Project (N-SKS) ** | | E | Odd/Even | |
| 66 | PTU2110043 | MBKM State Defense (N-SKS) ** | | E | Odd/Even | |
| 67 | ... | Courses taken outside the study program | | E | Odd/Even | |
| | | | | | | 100/22 |
| | TOTAL | | | | | 122 |

Remarks:

Students are required to submit a minimum of 144 credits, and a maximum of 148 credits including a thesis (consisting of 107 credits of mandatory subjects and 37 - 41 credits of optional courses).

- * Student achievement is given 1 credit with a maximum of two recognitions
- * The conversion of MBKM activities will be regulated separately by the MBKM Group of Animal Science and Industry Study Program.

Courses Code:

The course code starts with three capital letters indicating the names of the departments in the Faculty of Animal Sciences:

- UNU : Courses from the University
- PT : Courses from the Faculty of Animal Science
- PTU : Courses managed by the Study Program
- PTN : Courses managed by the Department of Animal Nutrition and Feed Science
- PTD : Courses managed by the Department of Animal Production
- PTP : Courses managed by the Department of Animal Breeding and Reproduction
- PTE : Courses managed by the Department of Livestock Socio-Economics
- PTH : Courses managed by the Department of Animal Products Technology
- PTUN : Courses by Study Programs coordinated by the Department of Animal Nutrition and Feed Science
- PTUD : Courses by Study Programs coordinated by the Department of Animal Production
- PTUP : Courses by Study Programs coordinated by the Department of Animal Breeding and Reproduction
- PTUE : Courses by Study Programs coordinated by the Department of Livestock Socio-Economics
- PTUH : Courses by Study Programs coordinated by the Department of Animal Products Technology

The department code is followed by the course management code in the department and/or laboratory. The first two digits represent the applicable curriculum year, followed by the study program, semester, course level code administered by the Department/Laboratory, and the last two digits are the serial number of the course:

Department of Animal Nutrition and Feed Science (PTN)

- PTN - 0 : Department of Animal Nutrition and Feed Science
- PTN - 1 : Laboratory of Nutritional Biochemistry
- PTN - 2 : Laboratory of Forage and Pasture Science
- PTN - 3 : Laboratory of Animal Nutrition
- PTN - 4 : Laboratory of Feed Technology

Department of Animal Breeding and Reproduction (PTP)

- PTP - 0 : Department of Animal Breeding and Reproduction
- PTP - 1 : Laboratory of Animal Breeding and Genetics
- PTP - 2 : Laboratory of Animal Physiology and Reproduction

Department of Animal Production (PTD)

- PTD - 0 : Department of Animal Production
- PTD - 1 : Laboratory of Dairy Science and Milk Industry
- PTD - 2 : Laboratory of Meat, Draught, and Companion Animals
- PTD - 3 : Laboratory of Poultry Science

Department of Livestock Social-Economics (PTE)

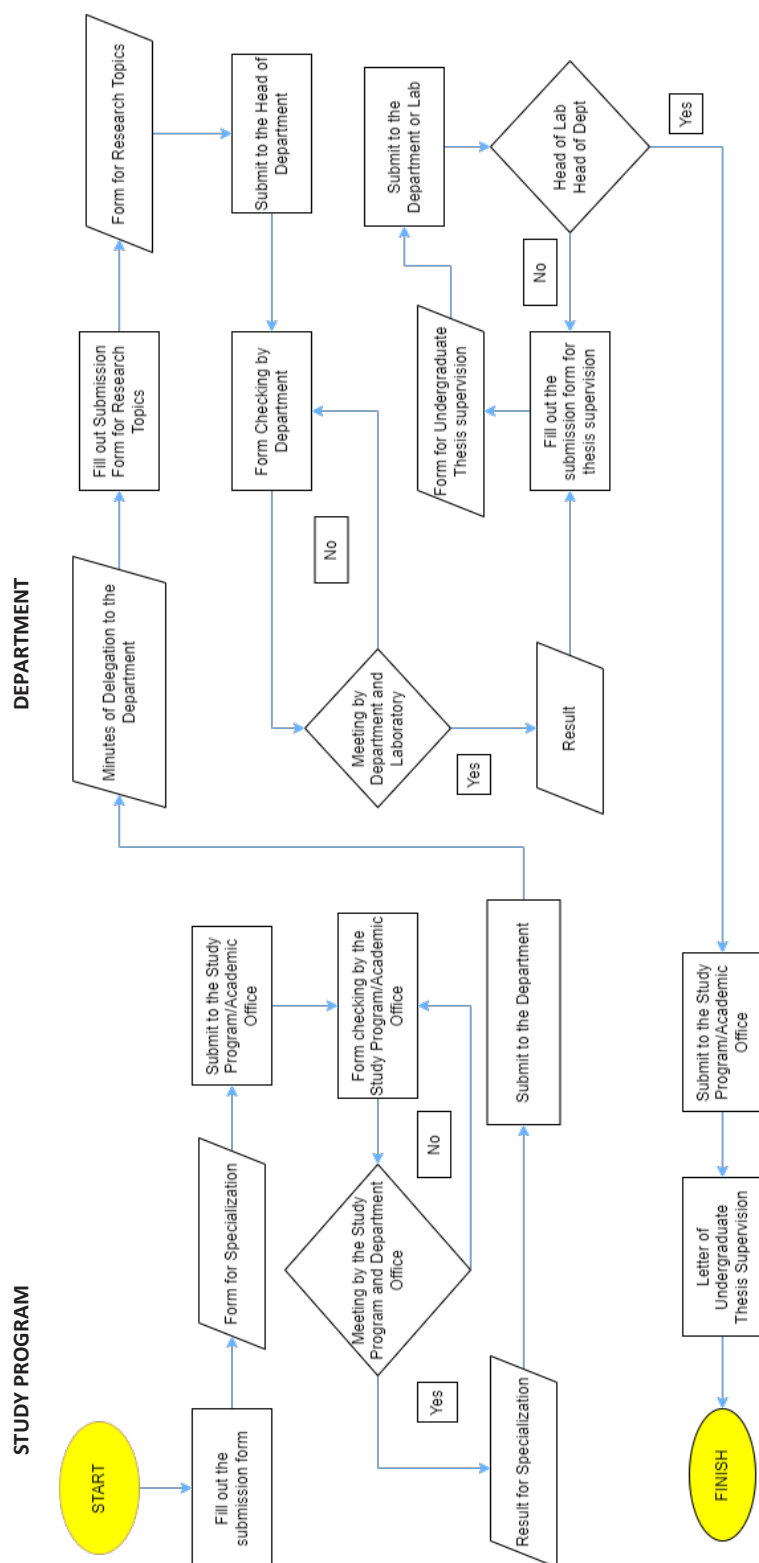
- PTE - 0 : Department of Livestock Social-Economics
- PTE - 1 : Laboratory of Livestock Agribusiness
- PTE - 2 : Laboratory of Communication and Community Development

Department of Animal Products Technology (PTH)

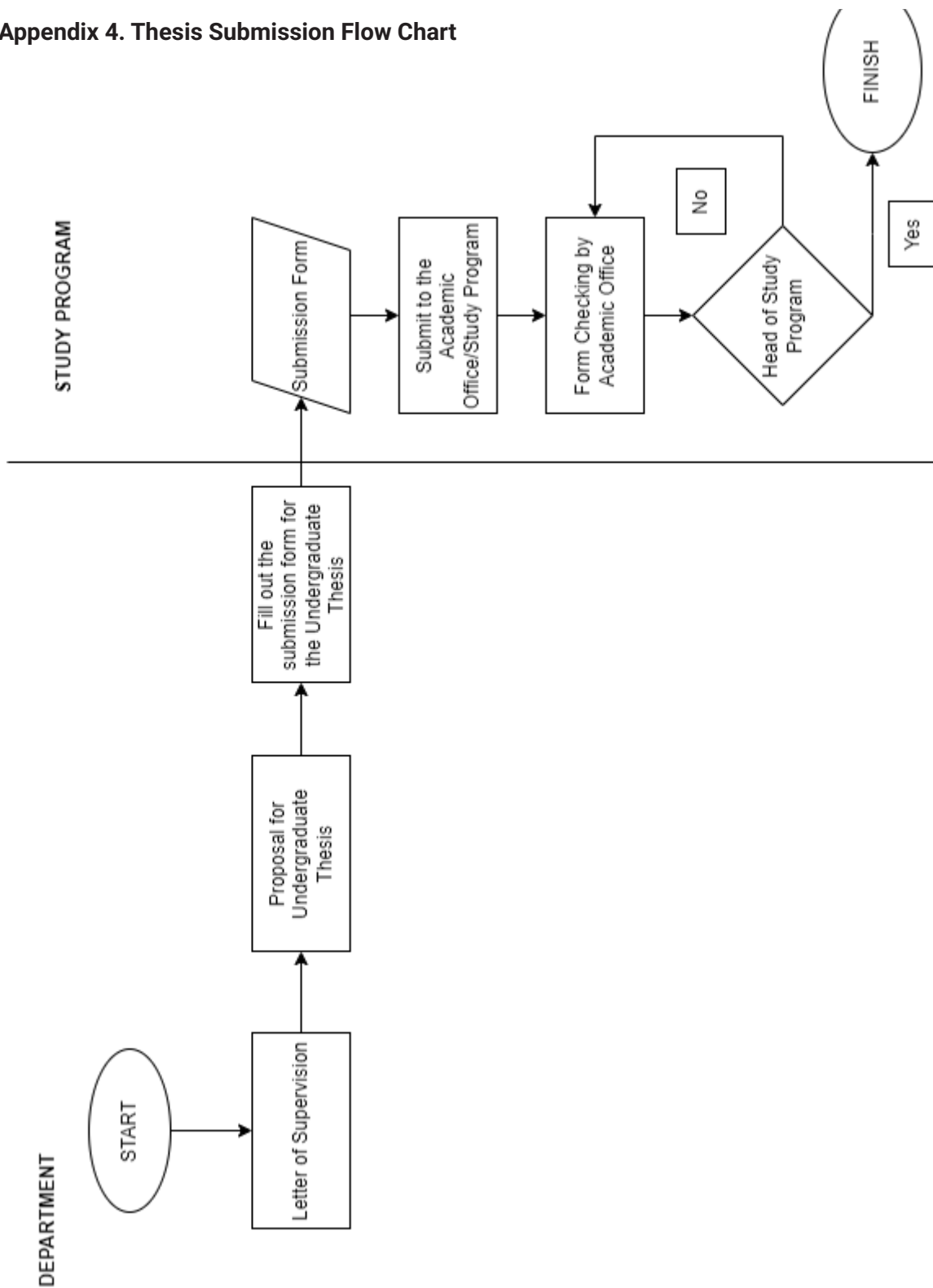
- PTH - 0 : Department of Animal Products Technology
- PTH - 1 : Laboratory of Meat Science and Technology
- PTH - 2 : Laboratory of Leather, Waste, and By-Products Technology
- PTH - 3 : Laboratory of Milk and Egg Technology



Appendix 3. Specialization Submission Flow Chart



Appendix 4. Thesis Submission Flow Chart



Lecturers



Agung Triatmojo, Ir., S.Pt., M.Sc., IPP

S.Pt (Universitas Gadjah Mada, 2019)

M.Sc (Universitas Gadjah Mada, 2021)

Specialization : Livestock Socio Economic



Aji Praba Baskara, Dr., Ir. S.Pt., IPP

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 2015)

Dr. (Universitas Gadjah Mada, Yogyakarta, 2020)

Specialization: Animal Feed Nutrition



Akhmad Fathoni, Ir., S.Pt., M.Sc., IPP

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 2015)

M.Sc. (Universitas Gadjah Mada, Yogyakarta, 2017)

On a Ph.D. program at Khon Kaen University, Thailand

Specialization: Livestock Breeding



Ali Agus, Prof. Dr. Ir., DAA., DEA., IPU., ASEAN Eng.

Ir. (Universitas Gadjah Mada, Yogyakarta, 1989)

DAA. (ENSA de Rennes, Rennes, France, 1993)

DEA. (ENSA de Rennes, Rennes, France, 1993)

Dr. (ENSA de Rennes, Rennes, France, 1996)

Prof. (Universitas Gadjah Mada, Yogyakarta, 2009)

Specialization: Animal Feed Nutrition, Feed Technology, Mycotoxins and Community Empowerment



Ambar Pertiwinigrum, Prof. Ir., M.Si., Ph.D., IPU., ASEAN Eng.

Ir. (Universitas Gadjah Mada, Yogyakarta, 1989)

M.Si. (Universitas Gadjah Mada, Yogyakarta, 1999)

Ph.D. (Gifu University, Japan, 2004)

Prof. (Universitas Gadjah Mada, Yogyakarta, 2019)

Specialization: Applied Microbiology



Andriyani Astuti, Ir., S.Pt., M.Sc., Ph.D., IPM., ASEAN Eng.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 1999)
M.Sc. (Universitas Gadjah Mada, Yogyakarta, 2008)
Ph.D. (Hiroshima University, Japan, 2015)
Specialization: Feed Technology Science



Annisa' Qurrotun A'yun, S.Pt., M.Sc.

S.Pt. (Universitas Gadjah Mada, 2016)
M.Sc. (Universitas Gadjah Mada, 2020)
Specialization : Livestock Socio Economic



Ari Surya Sukarno, Ir., S.Pt., M. Biotech., IPP.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 2014)
M.Biotech. (Universitas Gadjah Mada, Yogyakarta, 2016)
On Ph.D. program at Universitas Gadjah Mada, Yogyakarta
Specialization: Milk - Egg Science and Technology



Asih Kurniawati, Dr., Ir., S.Pt., M.Si., IPM.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 1995)
M.Si. (Universitas Gadjah Mada, Yogyakarta, 1999)
Dr. (Universitas Gadjah Mada, Yogyakarta, 2018)
Specialization: Nutritional Biochemistry and Biotechnology



Bambang Ariyadi, drh., M.P., Ph.D.

drh. (Universitas Gadjah Mada, Yogyakarta, 2001)
M.P. (Universitas Gadjah Mada, Yogyakarta, 2006)
Ph.D. (Hiroshima University, Japan, 2014)
Specialization: Poultry Production



Bambang Suhartanto, Prof. Dr. Ir., DEA. IPU.

Ir. (Universitas Gadjah Mada, Yogyakarta, 1982)
DEA. (Universite Montpellier II, France, 1990)
Dr. (Universitas Gadjah Mada, Yogyakarta, 2015)
Prof. (Universitas Gadjah Mada, Yogyakarta, 2022)
Specialization: Applied Physiology for Livestock Production



Bambang Suwignyo, Ir., S.Pt., M.P., Ph.D., IPM., ASEAN Eng.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 1999)
M.P. (Universitas Gadjah Mada, Yogyakarta, 2004)
Ph.D. (University of the Philippines at Los Banos, Philippines, 2010)
Specialization: Animal Feed Nutrition



Budi Guntoro, Prof. Ir., S.Pt., M.Sc., Ph.D., IPU., ASEAN Eng.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 1994)

M.Sc. (University of the Philippines at Los Banos, Philippines, 2000)

Ph.D. (Kasetsart University, Thailand, 2005)

Prof. (Universitas Gadjah Mada, Yogyakarta, 2017)

Specialization: Community Development & Management of Tropical Agricultural Development



Budi Prasetyo Widyobroto, Prof. Dr. Ir., DESS., DEA., IPU., ASEAN Eng.

Ir. (Universitas Gadjah Mada, Yogyakarta, 1984)

DESS. (IEMVT, Paris, France, 1988)

DEA. (Universite Rennes, France, 1989)

Dr. (Universite Rennes, France, 1992)

Prof. (Universitas Gadjah Mada, Yogyakarta 2011)

Specialization: Nutrition and Dairy Production



Chusnul Hanim, Dr. Ir., M.Si., IPM., ASEAN Eng.

Ir. (Universitas Gadjah Mada, Yogyakarta, 1989)

M.Si. (Universitas Gadjah Mada, Yogyakarta, 2002)

Dr. (Universitas Gadjah Mada, Yogyakarta, 2014)

Specialization: Nutritional Biochemistry and Biotechnology



Cuk Tri Noviandi, Ir., S.Pt., M.Anim.St., Ph.D., IPM., ASEAN Eng.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 1998)

M.Anim.St. (The University of Queensland, Australia, 2005)

Ph.D. (Utah State University, USA, 2013)

Specialization: Feed Technology, Mycotoxicology



Diah Tri Widayati, Prof. Ir. M.P., Ph.D., IPM.

Ir. (Universitas Gadjah Mada, 1991)

M.P. (Universitas Gadjah Mada, Yogyakarta, 1999)

Ph.D. (Nagoya University Japan, Japan, 2004)

Prof. (Universitas Gadjah Mada, Yogyakarta 2020)

Specialization: Reproduction/Embryology



Dimas Hand Vidya Paradhipta, Ir., S.Pt., M.Sc., Ph.D., IPP.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 2014)

M.Sc. (Gyeongsang National University, South Korea, 2018)

Ph.D. (Gyeongsang National University, South Korea, 2021)

Specialization: Feed Technology and Ruminant Nutrition



Dyah Maharani, Prof. Ir., S.Pt., M.P., Ph.D., IPM.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 1994)

M.P. (Universitas Gadjah Mada, Yogyakarta, 2000)

Ph.D. (Chungnam National University, South Korea, 2012)

Prof. (Universitas Gadjah Mada, Yogyakarta, 2022)

Specialization: Livestock Breeding Science and Molecular Genetics



Edi Suryanto, Ir., M.Sc., Ph.D., IPU., ASEAN Eng.

Ir. (Universitas Gadjah Mada, Yogyakarta, 1985)
M.Sc. (University of Glasgow, Scotland, UK, 1992)
Ph.D. (Universiti Putra Malaysia, Malaysia, 2000)
Specialization: Meat Technology



Endang Sulastrri, Ir., S.Pt., M.A., Ph.D., IPM.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 1995)
M.A. (Hiroshima University, Japan, 2001)
Ph.D. (Hiroshima University, Japan, 2004)
Specialization: Rural Studies



Endang Wahyuni, S.Pt., M.Biotech.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 2001)
M.Biotech. (Universitas Gadjah Mada, Yogyakarta, 2009)
On Ph.D. program at Universitas Gadjah Mada, Yogyakarta
Specialization: Biotechnology



Endy Triyannanto, Ir., S.Pt., M.Eng., Ph.D., IPM., ASEAN Eng.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 2008)
M.Eng. (Universitas Gadjah Mada, Yogyakarta, 2011)
Ph.D. (Gangneung Wonju National University, South Korea, 2015)
Specialization: Livestock Product Technology



Fransiskus Trisakti Haryadi, Ir., M.Si., Ph.D. IPM.

Ir. (Universitas Gadjah Mada, Yogyakarta, 1989)
M.Si. (Institut Pertanian Bogor, Bogor, 1997)
Ph.D. (Tokyo University of Agriculture and Technology, Japan, 2002)
Specialization: Agricultural Communication and Counselling



Galuh Adi Insani, Ir., S.Pt., M.Sc., IPM.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 2007)
M.Sc. (Universitas Gadjah Mada, Yogyakarta, 2011)
On Ph.D. program at Universitas Gadjah Mada, Yogyakarta
Specialization: Genetics and Livestock Breeding



Hamdani Maulana, Ir., S.Pt., M.Sc., IPP.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 2016)
M.Sc. (Universitas Gadjah Mada, Yogyakarta, 2019)
Specialization: Meat Livestock Production



Heru Sasongko, Dr. Ir., M.P.

Ir. (Universitas Gadjah Mada, Yogyakarta, 1986)
M.P. (Universitas Gadjah Mada, Yogyakarta, 1993)
Dr. (Universitas Gadjah Mada, Yogyakarta, 2016)
Specialization: Poultry Science



Hendra Nur Cahyo, S.Pt., M.Sc.

S.Pt. (Universitas Gadjah Mada, Yogyakarta 2017)
M.Sc. (Universitat Bonn, Germany, 2021)
On Ph.D. program at Norwegian University of Life Sciences, Norway
Specialization : Nutritional Biochemistry



Insani Hubi Zulfa, S.Pt., M.Sc.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 2014)
M.Sc. (The University of Nottingham, England, 2016)
On Ph.D. program at University Edinburg, United Kingdom
Specialization: Animal Feed Nutrition



Joko Sujiwo, S.Pt., M.Sc.

S.Pt (Universitas Gadjah Mada, 2015)
M.Sc. (Kangwon National University, South Korea, 2018)
Specialization : Poultry Production



Kustantinah, Prof. Dr. Ir., DEA., IPU.

Ir. (Universitas Gadjah Mada, Yogyakarta, 1984)
DEA. (ENSAIA - INPL, France, 1989)
Dr. (ENSAIA - INPL, France, 1992)
Prof. (Universitas Gadjah Mada, Yogyakarta, 2009)
Specialization: Ruminant Livestock Nutrition



Lies Mira Yusiati, Prof. Dr. Ir., SU. IPU., ASEAN Eng.

Ir. (Universitas Gadjah Mada Yogyakarta, 1984)
SU. (Universitas Gadjah Mada, Yogyakarta, 1989)
Dr. (Universitas Gadjah Mada, Yogyakarta, 2006)
Prof. (Universitas Gadjah Mada, Yogyakarta, 2009)Specialization:
Nutritional Biochemistry



Miftahush Shirothul Haq, Dr., Ir., S.Pt., IPP.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 2015)
Dr. (Universitas Gadjah Mada, Yogyakarta, 2020)
Specialization: Forage



Mochammad Fahmi Habibi, Ir., S.Pt., M.Sc., IPP.
S.Pt. (Universitas Gadjah Mada, Yogyakarta, 2015)
M.Sc. (University of Debrecen, Hongaria, 2018)
On Ph.D. program at Wageningen University, Netherlands
Specialization: Poultry Science



Muhsin Al Anas, Dr., Ir., S.Pt., IPP.
S.Pt. (Universitas Gadjah Mada, Yogyakarta, 2015)
Dr. (Universitas Gadjah Mada, Yogyakarta, 2020)
Specialization: Nutritional Biochemistry



Mujtahidah Anggriani Ummul Muzayyanah, Ir., S.Pt., M.P., Ph.D., IPM.
S.Pt. (Universitas Gadjah Mada, Yogyakarta, 2000)
M.P. (Universitas Gadjah Mada, Yogyakarta, 2003)
Ph.D. (Hiroshima University, Japan 2011)
Specialization: Agriculture/Farm Economics



Muhammad Danang Eko Yulianto, S.Pt., M.Si.
S.Pt. (Universitas Gadjah Mada, Yogyakarta, 2007)
M.Si. (Institut Pertanian Bogor, Bogor, 2011)
On Ph.D. program at Universitas Gadjah Mada, Yogyakarta
Specialization: Meat, Draught and Companion Animal Production



Mohammad Zainal Abidin, Ir., S.Pt., M.Biotech., Ph.D., IPM.
S.Pt. (Universitas Gadjah Mada, Yogyakarta, 2007)
M.Biotech. (Universitas Gadjah Mada, Yogyakarta, 2009)
Ph.D. (University of Groningen, The Netherlands, 2021)
Specialization: By-product Technology and Environment



Moh. Sofi'ul Anam, S.Pt., M.Sc.
S.Pt. (Universitas Gadjah Mada, 2016)
M.Sc. (Universitas Gadjah Mada, 2020)
On Ph.D. program at Universitas Gadjah Mada
Specialization : Animal Feed Nutrition



Muhlisin, Ir., S.Pt., M. Agr., Ph.D., IPP.
S.Pt. (Universitas Gadjah Mada, Yogyakarta, 2008)
M.Agr. (Kangwon National University, South Korea, 2011)
Ph.D. (Kangwon National University, South Korea, 2015)
Specialization: Nutritional Biochemistry



Nafiatul Umami, Ir., S.Pt., M.P., Ph.D., IPM., ASEAN Eng.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 2001)

M.P. (Universitas Gadjah Mada, Yogyakarta, 2004)

Ph.D. (University of Miyazaki, Japan 2013)

Specialization: Animal Feed Nutrition



Nanung Agus Fitriyanto, Ir., S.Pt., M.Sc., Ph.D., IPM.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 2001)

M.Sc. (Gifu University, Japan 2008)

Ph.D. (Gifu University, Japan 2011)

Specialization: Livestock Product Technology



Nanung Danar Dono, Ir., S.Pt., M.P., Ph.D., IPM., ASEAN Eng.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 1997)

M.P. (Universitas Gadjah Mada, Yogyakarta, 2005)

Ph.D. (University of Glasgow, Scotland, UK, 2013)

Specialization: Nutrition for Poultry



Nilo Suseno, S.Si., M.Si.

S.Si. (Universitas Gadjah Mada Yogyakarta, 2004)

M.Si. (Universitas Gadjah Mada, Yogyakarta, 2007)

Specialization: Tissue Culture and Forage/Pasture Science



Novita Kurniawati, S.Pt., M.App.Sc.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 2003)

M.App.Sc. (Gifu University, Japan, 2011)

On Ph.D. program at Universitas Gadjah Mada, Yogyakarta

Specialization: Livestock Product Technology



Nur Laili Ma'rufah, S.Pt., M.Sc.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 2011)

M.Sc. (Universitas Gadjah Mada, Yogyakarta, 2014)

On Ph.D. program at University of Miyazaki, Japan)

Specialization: Dairy Animal Production



Nurliyani, Prof. Dr. Ir., M.S., IPM.

Ir. (Universitas Gadjah Mada Yogyakarta, 1984)

M.S. (Universitas Gadjah Mada, Yogyakarta, 1992)

Dr. (Universitas Gadjah Mada, Yogyakarta, 2006)

Prof. (Universitas Gadjah Mada, Yogyakarta, 2016)

Specialization: Milk and Egg Technology



Panjono, Ir., S.Pt., M.P., Ph.D., IPM., ASEAN Eng.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 1994)

M.P. (Universitas Gadjah Mada, Yogyakarta, 2004)

Ph.D. (Kangwon National University, South Korea, 2009)

Specialization: Meat, Draught and Companion Animal Production



Putri Kusuma Astuti, S.Pt., M.Sc.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 2017)

M.Sc. (University of Debrecen, Debrecen Hungary, 2020)

On Ph.D. program at University of Debrecen, Debrecen Hungary

Specialization: Livestock Breeding



R. Ahmad Romadhoni Surya Putra, Ir., S.Pt., M.Sc. Ph.D., IPM., ASEAN Eng.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 2004)

M.Sc. (Kasetsart University, Thailand, 2012)

Ph.D. (University of Copenhagen, Denmark, 2016)

Specialization: Livestock Socio Economic



R. Edwin Indarto, S.Pt., M.P.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 1993)

M.P. (Universitas Gadjah Mada, Yogyakarta, 1998)

Specialization: Animal Feed Nutrition



Rini Widiati, Prof., Dr. Ir., M.S., IPU.

Ir. (Universitas Gadjah Mada, Yogyakarta, 1979)

M.S. (Institut Pertanian Bogor, Bogor, 1986)

Dr. (Universitas Gadjah Mada, Yogyakarta, 2003)

Prof. (Universitas Gadjah Mada, Yogyakarta, 2019)

Specialization: Livestock Economics



Rio Olympias Sujarwanta, Dr. Ir. S.Pt., M.Sc., IPM.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 2010)

M.Sc. (Universitas Gadjah Mada, Yogyakarta, 2012)

Dr. (Universitas Gadjah Mada, Yogyakarta, 2016)

Specialization: Livestock Product Technology



Riyan Nugroho Aji, Ir., S.Pt., M.Sc., IPP.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 2015)

M.Sc. (Universitas Gadjah Mada, Yogyakarta, 2017)

On Ph.D. program at University of Miyazaki, Japan

Specialization: Livestock Reproduction Science



Rusman, Ir., M.P., Ph.D.

Ir. (Universitas Gadjah Mada, Yogyakarta, 1993)
M.P. (Universitas Gadjah Mada, Yogyakarta, 1997)
Ph.D. (Niigata University, Japan, 2004)
Specialization: Meat Processing Technology



Sigit Bintara, Dr. Ir., M.Si., IPU., ASEAN Eng.

Ir. (Universitas Gadjah Mada, Yogyakarta, 1992)
M.Si. (Universitas Airlangga, Surabaya, 2000)
Dr. (Universitas Gadjah Mada, Yogyakarta, 2009)
Specialization: Livestock Reproduction Science



Satyaguna Rakhmatulloh, Ir., S.Pt., M.Sc., IPP.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 2015)
M.Sc. (Universitas Gadjah Mada, Yogyakarta, 2017)
On Ph.D. program at Universitas Gadjah Mada, Yogyakarta
Specialization: Livestock Product Technology - Functional Feed



Siti Andarwati, Dr. Ir., S.Pt., M.P., IPM., ASEAN Eng.

S.Pt. (Universitas Gadjah Mada, Yogyakarta, 1998)
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Specialization: Livestock Socio Economic



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Specialization: Livestock Breeding and Molecular Genetics



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Specialization: Animal Production Systems



Tristiano Nugroho, S.Pt., M.Sc.

S.Pt (Universitas Sebelas Maret Surakarta 2017)
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Specialization: Animal Production Systems



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Specialization: Milk Production and Technology of Dairy Animal



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M.Sc. (Universitas Gadjah Mada, Yogyakarta, 2016)
Ph.D. (Gifu University, Japan, 2020)
Specialization: Animal Waste Microbiology and Technology



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Post-doc. (JIRCAS Tsukuba Japan, 2009)
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Specialization: Feed Biotechnology



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Specialization: Poultry Production



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Specialization: Environment Physiology



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Specialization: Forage and Feed Plant Breeding



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Specialization: Livestock Food Safety



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Specialization: Dairy Animal Production.



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Specialization: Nutrition for Poultry

Guest Lecturers



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B.Sc. (University of New England, 1972)
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M.Sc. (Wageningen University: Food Safety)
M.M. (Universitas Hasanuddin: Faculty of Economics and Business)
Occupation: Chairman of Perkasa Group



Ferry Poernama, Dr. Ir., M.Sc.

Senior Vice President Head of Feed technology & Nutrition Feed Division,
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- PT. Citra Agro Buana Semesta (Manager Feedlot)
- Canadian Cooperative Program (Tsunami Ekonomi Recovery Program)
- Banda Aceh (Tenaga Ahli Peternakan)
- Indonesian Institute of Animal Science Development Studies (Secretary)
- Coffey International Development (Project Manager)
- Northern Territory Cattleman's Association (NTCA Indonesia Pastoral Program/NIAPP) joint program with PB ISPI (Indonesian Student Coordinator)
- Benart Livestock. Co Ltd. Katherine.
- Australia (Manager Station)



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