



**FAKULTAS PETERNAKAN
UNIVERSITAS BRAWIJAYA**
*FACULTY OF ANIMAL SCIENCE
UNIVERSITAS BRAWIJAYA*

CURRICULUM DOCUMENT

ANIMAL SCIENCES
DOCTORAL PROGRAM

2023/2024 ACADEMIC YEAR

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FOREWORD

The rapid advancement of science and technology in this era of globalization brings significant changes to human life, including in the workplace. These changes demand high and relevant competencies, encompassing the implementation of science and technology as required by stakeholders. The general needs of society necessitate the development of curricula by higher education institutions as providers of human resources. The basis for curriculum development is established through several legislative frameworks, including the Law of the Republic of Indonesia Number 12 of 2012 on Higher Education, Presidential Regulation of the Republic of Indonesia Number 8 of 2012 on the Indonesian National Qualifications Framework (KKNI), Minister of Education and Culture Regulation Number 49 of 2014 on National Standards for Higher Education, Minister of Education and Culture Regulation Number 3 of 2020 on National Standards for Higher Education, and Government Regulation Number 4 of 2012 on the Management of Higher Education. In response to these demands, the curriculum has been reviewed and adjusted to meet societal needs, ensuring that graduates from the Doctoral Program in Animal Science at the Faculty of Animal Science, University of Brawijaya (PS-DIT FPt UB) remain relevant to the evolving demands of the job market. Therefore, PS-DIT has aligned with the developments in the education sector as per the Minister of Research, Technology, and Higher Education Regulation Number 53 of 2023 concerning the Assurance of Higher Education Quality.

The review and development of the curriculum have resulted in the formulation of the 2023/2024 curriculum. This curriculum is a revision and improvement of the previous one and serves as a guide for conducting the learning process with the aim of achieving the learning outcomes formulated according to the Indonesian National Qualifications Framework (KKNI). This academic script can guide the implementation of the learning process in PS-DIT. Constructive inputs from various parties are highly anticipated for its improvement.

Malang, 20th June 2024

TEAM

DOCTORAL PROGRAM ANIMAL SCIENCE SPECIFICATIONS

1	Institution Name	Universitas Brawijaya
2	Study Program Name	Animal Sciences Doctoral Study Program
3	Address	Veteran Street Malang
4	Accreditation Status	Decree of the Minister of Higher Education Number. 5276/SK/BAN-PT/Ak.Ppj/D/XII/2023 valid from 29th December 2023 to 29th December 2028 (excellent accreditation)
5	Type (e.g full/part-time, residential/distance learning, dual, intensive programme)	Full-time 6 Semester
6	Degree	Dr. (Doctor)
7	Graduate learning achievement	Write down the main competencies of graduates which are the core of CPL (full explanation refers to the curriculum chapter
8	Length of Study and number of credits earned in ECTS	DPAS equalizes the number of semester credit units with <i>European Credit System</i> (ECTS) refers Regulation of the Minister of Education and Culture Number 53 of 2023 concerning Quality Assurance of Higher Education. One SCU Duration of Study are 6 semester by 173.33 hours per semester.
9	Requirements for New Students	As per entry requirements
10	Starting Date of Academic Year	September – December January -August
11	Curriculum structure, learning strategy, evaluation method, etc	Outcome Base Education Curriculum, Student-centered learning, Learning Outcome Assessment
12	Standard Fee, for example: Fee per Semester /student	IDR 10,000,000
13	The date the study program specification was approved/revised	June 20 th 2024
14	Proposal Status (choose one)	Redesign/Reconstruction Results

PART I
DOCTORAL PROGRAM ANIMAL SCIENCE
SPECIFICATIONS

NAME OF STUDY PROGRAM

Doctoral Program Animal Science (DPAS)

UNIVERSITY

Universitas Brawijaya (UB)

VISION

Becoming a Pioneer and Reformer College with a Reputation International in Science and Technology, Especially those Supporting Culture-Based Industry for Community Prosperity

MISSION

1. Organizing an international standard education that produce graduates who believe and fear God Almighty, and has noble morals and character, is independent, as well as professional, and entrepreneurial spirit;
2. Carrying out the role of universities as agents of reform, pioneer and disseminator of science, technology, arts and humanities and as an agent of the nation's economic development based on the value of local wisdom and noble; and
3. Organizing superior higher education governance, fair and sustainable

DEGREE

Doctor (Dr)

ORGANIZING FACULTY

Animal Science Faculty

VISION

The vision is to become Pioneer College and Reformer with International Reputation in Science, Technology, Arts and Humanities Especially Supporting Culture-Based Industry for Prosperity Public.

MISSION

1. Organizing international standard education that produce graduates who are faithful and devoted to God Almighty, and has morals and character noble, independent, as well as professional and entrepreneurial spirit;
2. Carrying out the role of universities as agents developer and disseminator of science and technology as well as an agent of the nation's economic development by based on the value of noble local wisdom;
3. Organizing superior higher education governance, fair and sustainable

STUDY PROGRAM

VISION

To become an excellent educational institution for the Animal Science Doctoral Program nationally and internationally, and as a scientific reference center and implementation of science and technology through education and teaching, research, and community service.

MISSIONS

1. Organizing education and learning process as well as carrying out research in the field of animal science, product development and implementation in accordance with the demands of science and technology and the latest problems.
2. Publish research results nationally and internationally regularly and continuously;
3. Develop and organize scientific cooperation and its implementation with relevant parties at regional, national and global levels;
4. Develop and implement quality standardization in a sustainable manner.

EDUCATION PHILOSOPHY

Doctor of Animal Science education in FAS UB is a professional and independent resources to solve problem of food security through innovative research based on scientific with areas of discovery, a basic understanding of field and the relationship of each field to human civilization and new finding (invention).

ACADEMIC ETHIC

The academic community in carrying out the functions of their rights and obligations will not be separated of academic ethics that apply universally (honesty, openness, objectivity, lifelong learning, mutual respect and not applicable discriminatory. Academic ethics must be reflected in the teaching and learning process, research, community service, publications, the use of degrees and so on support in the form of administrative processes). Actions that violate Academic Ethics constitutes an unethical act or academic violation. Activities included in the category of unethical actions and or academic violations are prohibited acts, among others are (1) cheating/cheating in exams /cheating, (2) plagiarism, (3) jockeying, (4) forgery, (5) bribery, (6) action discriminatory, and the like

CLASS; Regular

Program :

- **Reguler**
- **Doctor by research**
- **Join supervision program**
- **Join degree program**
- **Double degree program**

LANGUAGE: Indonesia Language (Bahasa)

ACCREDITATION STATUS:

Decree of the Minister of Higher Education Number. 5276/SK/BAN

PT/Ak.Ppj/D/XII/2023 valid from 29th December 2023 to 29th December 2028

(excellent accreditation)

TEACHING AND LEARNING METHODS

1. Student Center Learning, Problem Based Learning, lecturer-student interaction- the natural environment, other sources/media, Cooperative Learning.
2. Interdisciplinary approach: Interdisciplinary approach is an approach in solving a problem by using a review of various viewpoints of cognate, relevant or appropriate scientific fields in an integrated manner.
3. Multidisciplinary Approach: Multidisciplinary approach is an approach in solving a problem by using various points of view of several relevant scientific clusters.
4. Transdisciplinary Approach: Transdisciplinary approach is an approach in solving a problem by using a review of the field of science that is relatively mastered and relevant to the problem to be solved but is outside the field of science.

ENTRY REQUIREMENTS

- a. Independent Selection of UB Postgraduate Odd Semester
- b. Even Semester UB Postgraduate Independent Selection

The requirements for following the respective path are from undergraduate Animal Science Students, or other exact majors with the obligation to follow matriculation.

SCIENTIFIC CONCEPTS AND SUPPORTING TECHNOLOGY

Scientific concept by prioritizing attitude in order to develop knowledge and innovative improvement in skills

STUDY TIME AND STUDY LOAD

A credit is 62-84 credits consists of 23 credits of coursework and 42 credits for the dissertation with the total of 65 credits required to complete the program with a study length of 6 semesters

DISTINCTIVENESS OF STUDY PROGRAM

Distinctiveness of DPAS: Strengthening student/graduate competencies in designing research to solve livestock industry problem.

PART II

DESIGN AND DEVELOPMENT CURRICULUM

PHILOSOPHICAL FOUNDATION

The philosophical foundation underlying the development of a curriculum determines the quality of graduates (outputs) that will result from a transformation process of implementing a curriculum, in terms of the sources and contents of the curriculum, the learning process, the position of students, assessment of learning processes and outcomes, as well as student relationships. with society and the natural environment around it. The curriculum is developed with a philosophical foundation that provides the basis for the development of all potential learners to become quality Indonesian human beings listed in the national education goals. Based on this, the curriculum of DPAS was developed based on the following philosophy: (1) Education is a process of humanizing students in their human dignity. Education is at developing spiritual intelligence, emotional intelligence, intellectual intelligence, academic brilliance, through disciplined education both by instructional effect and nurturant effect; (2) Education is a cultural transformation, education is rooted in the nation's culture to build the nation's life today and in the future. Students are heirs of the nation's creative culture; (3) Education is to build a better present and future life than the past with various intellectual abilities, communication skills, social attitudes, care, and participation in building a better life for the community and nation. education is rooted in the nation's culture to build the nation's life today and in the future. Students are heirs of the nation's creative culture; (3) Education is to build a better present and future life than the past with various intellectual abilities, communication skills, social attitudes, care, and participation in building a better life for the community and nation. education is rooted in the nation's culture to build the nation's life today and in the future. Students are heirs of the nation's creative culture; (3) Education is to build a better present and future life than the past with various intellectual abilities, communication skills, social attitudes, care, and participation in building a better life for the community and nation.

THEORETICAL FOUNDATION

The theoretical basis for curriculum development is developed on the theory of standard-based education and competency-based curriculum. Education-based standards stipulate the existence of national standards as the minimum quality of education which is broken down into standards: (1) graduate competency standards, (2) learning content standards, (3) process standards, (4) learning education assessment standards ; (5) standards Lecturers and Education Personnel; (6) standard of learning facilities and infrastructure; (7). management standards; and (8) learning financing standards

The competency-based curriculum, also known as the OBE (Outcome Based Education) Curriculum, is based on the design of providing the widest possible learning experience for students in developing the ability to behave, be knowledgeable, skilled, and act responsibly.

JURIDICAL FOUNDATION

The development and preparation of the curriculum is based on the following juridical foundations: (1) the 1945 Constitution of the Republic of Indonesia; (2) Law Number 20 of 2003 concerning the National Education System; (3) Law Number 17 of 2005 concerning the National Long-Term Development Plan, along with all the provisions set forth in the National Medium-Term Development Plan; (4) Government Regulation Number 19 of 2005 concerning National Education Standards as amended by Government Regulation Number 32 of 2013 concerning Amendments to Government Regulation Number 19 of 2005 concerning National Education Standards; (5) Law Number 14 of 2005 concerning Teachers and Lecturers; (6) Presidential Regulation of the Republic of Indonesia Number 8 of 2012 concerning the Indonesian National Qualifications Framework (IQF); (7) Law Number 12 of 2012 concerning Higher Education; (8) RI Government Regulation Number 4 of 2014 concerning the Implementation and Management of Higher Education, and Regulation of the Minister of Education and Culture Number 3 of 2020 and Regulation of the Minister of Education and Culture Number 53 of 2023 concerning Quality Assurance of Higher Education.

IDEAL FOUNDATION

A good curriculum is to have the following criteria: (1). The curriculum refers to the vision and mission of UB, Faculty of Animal Sciences, and DPAS. (2). Taking into account the needs of the community (Alumni, Stakeholders, Lecturers, and Students) and the development of science, technology, culture, and art, (3). Integrated and efficient, and developed continuously. (4). Sharpen expertise and foster a conducive and comfortable academic atmosphere. DPAS curriculum meets these criteria.

The DPAS curriculum is an OBE curriculum, which brings graduates to have the profile of researchers and policymakers. This reference provides a research and technology framework, which describes the relationship between graduate study materials and elements of competence that must be achieved in implementing a research-based curriculum. The curriculum of DPAS encourages students to solve problems and make policies in a good and responsible research/scientific way.

BACKGROUND DEVELOPMENT CURRICULUM OF STUDY PROGRAM

One of the descriptions of the implementation of the Constitution of the Republic of Indonesia Year 1945 is the enactment of the Law of the Regulation of the Minister of Education and Culture Number 53 of 2023 concerning Quality Assurance of Higher Education, followed by preparation and regulation of legal products related to the implementation of the process education in Indonesia. Next, more technically followed by compiling The Ministry of National Education's Strategic Plan which includes the Vision and Mission of Education National. The vision of Indonesia's National Education is the realization of an education system as a strong and authoritative social institution to empower all citizens Indonesia has developed into a quality human being so that it can and proactively respond to the challenges of an ever-changing era. Educational Mission National are: (1) seeking to expand and equalize opportunities obtain quality education for all Indonesian people; (2) help and facilitate the development of the full potential of the nation's children from an early age until the end of life in order to create a learning society; (3) increase readiness of inputs and the quality of the educational process to optimize formation of a moral personality; (4) improve professionalism and accountability of educational institutions as a center for the cultivation of science, skills, experience, attitudes and values based on national and global standards; and (5)

empowering community participation in the implementation of education based on the principle of autonomy in the context of the Unitary State of the Republic of Indonesia. Indonesian people referred to in the vision of Indonesia's national education are: quality human beings in intellectual, spiritual, emotional, social, as well as kinesthetic (gestures) and expertise, as well as being able to face development and global competition. The quality of Indonesian people like that can be achieved through the implementation of high quality education supported by a high-quality learning process. To that end, a curriculum that is can provide direction for meaningful learning in the DPAS, with graduates having the "ability" equivalent to "learning achievement" formulated at level 9 IQF.

The higher education curriculum is defined as a set of plans and arrangements regarding competence (learning outcomes), study materials, processes, and assessment that is used as a guideline for the implementation of the study program. The curriculum is a program that is structured and implemented to achieve an educational goal. The curriculum is defined as a program in the form of: program documents and program implementation. As a document, curriculum (curriculum plan) is in the form of details of learning achievements, courses, syllabus, lesson plans, and success evaluation systems. On the other hand, curriculum as a program implementation is a form of learning that actually done (actual curriculum).

Analysis of the abilities possessed by graduates of DPAS at this time. These are the results obtained from sources of students, alumni and stakeholders who used as a consideration in preparing the curriculum to ensure graduates who have comprehensive competencies in accordance with the graduate profile (scientist/ researcher and police maker).

Formulation of profiles for graduates of DPAS to address future challenges include:

- a) There are internal challenges regarding the condition of higher education today is related to the demands of higher education which refers to 10 (ten) National Higher Education Standards. Therefore, the great challenge that faced is how to make human resources age This abundant productive resource can be transformed into a resource human beings who have competencies and skills through education so that be a productive human resource.

- b) Existence of external challenges related to globalization and various issues relating to environmental issues, advances in technology and information, the rise of the creative and cultural industries, as well as the development of education in international level. The flow of globalization will shift people's lifestyles from traditional agrarian and commercial societies into industrial and commercial societies as can be seen in the World Trade Organization (WTO), Association of South East Asian Nations (ASEAN) Community, Asia-Pacific Economic Cooperation (APEC), and the ASEAN Free Trade Area (AFTA).
- c) There is a challenge in changing the paradigm of the study program curriculum management DPAS is perfecting: (1) learning patterns that are centered on educators (Contextual Learning) into learning centered on students (Students Center Learning); (2) one-way learning pattern (interaction lecturer-student) into interactive learning (lecturer-student interaction, community-natural environment, other sources/media); (3) learning patterns intended to be cooperative learning; (4) instrumentation of learning approach to be learning based on multimedia; (5) learning patterns integrated (multi-disciplinary) in groups to strengthen development of the special potential of each student and skills special interest to students

TRACER STUDY

Method of Collecting Data

The method used in tracing graduate data (tracer study) is survey. Survey respondents are students, alumni and graduate users. Alumni are DPAS graduates. The DPAS FAS UB. While the user graduates are grouped by type of agency/non-agency, namely: a. Training and Research Center, b. Employee/User Graduate, c. Government//University

Data Collection

Data collection was carried out by distributing questionnaires to respondents. The survey was conducted for one month from 15 August -15 September 2020. The distribution of questionnaires is carried out randomly to alumni and students graduate users. Respondents do not need to write names to guarantee confidentiality and objectivity. Instrument The instrument used to collect data is a questionnaire. Questionnaire in the form of a soft file. filled in by the respondent online by accessing

the link: <https://SINATRA> (alumni) and (stakeholder), Questionnaire developed by the Curriculum Evaluation Team Table 2. (Appendix 1.) to explore information about: 1. Occupation of DPAS graduates, and 2. Improvement of Career Destination. 3. Knowledge that must be possessed by DPAS graduate to work in government/non-government agencies. 4. Soft skills that must be possessed. Data analysis Data processing is carried out in stages: 1. Data selection 2. Tabulate the data in the data recapitulation table for each group respondent 3. Counting the number of choices/answers based on the respondent group 4. Calculate the percentage of each option. 5. Describe the percentage in the form of a bar chart in the answer. 6. After interpreting the results of the analysis, then do informal presentation of data, namely through narrative presentation.

Table 1. Development and preparation of DPAS 2023 curriculum through the following stages:

Table 1. Stages of Development and Preparation of DPAS Curriculum 2023/2024

No	Stage	Activity	Participant	Executor
1	Curriculum Evaluation	On-going curriculum evaluation	Surveys on study programs, lecturers, student	DPAS Curriculum Development Team
		<i>Tracer Study</i> towards graduate users and stakeholders	<i>Stakeholders</i>	Team/ Study Program
		Socialization of the IQF concept, Content Standards and SNPT Process Standards and Basic Materials Studies	Study Program Curriculum Development Team, Head of Study Program, 2 lecturers	Committee
2	Development Curriculum	Adjustments to international accreditation recommendations to be implemented in 2023	Head of Faculty, Head of Study Program, Head of Interest	Curriculum Development Team
		Composing the Profile of DPAS Graduates	Head of Faculty, Head of Study Program, Head of Interest (peminatan).	Curriculum Development Team
		Determination of PSDIT Learning Outcomes regarding changes to the structure of Compulsory course, electives and final assignments	Head of Faculty, Curriculum Development	Vice Dean I and Head of Study Program
		Establishment of new courses based on learning outcome and Study materials	Head of University, Head of Faculty, Vice Dean 1 and Head of Program	Head of University, Head of Faculty, Vice Dean 1 and Head of Program

		Preparation of course New lectures in accordance with Minister of Education, Culture and Research and Technology No. 53 of 2023 concerning Quality Assurance in Higher Education	Team Teaching	Team Teaching
		Completion of curriculum documents (syllabus, course study plan program, teaching materials, assessment instrument)	Team Teaching	Team Teaching
		Preparation of DPAS Learning Outcomes	Curriculum Development Team for Faculty Leaders, Alumni and stakeholders.	Curriculum Development Team
		Determination of DPAS Learning Outcomes	Faculty Leader, Curriculum development team	Vice Dean I and Head of Study Program
		Formation of courses based on ILOs and Study Material	Tim, Head of Interest and Lecturer	Head of Study Program
		Formation of Curriculum Structure and study load	Head of University and Leader, Vice Dean1, Head of Study Program	University Leaders, Deans, Curriculum Development Team.
		ILOs Preparation Studying	Supporting lecturer	Supporting lecturer
		Completion of curriculum documents (syllabus, lesson plans, teaching materials, assessment instrument)	Supporting lecturer	Supporting lecturer
3	Implementatio n, Monitoring and Evaluation	Implementation in Study Program	Head of Study Program, and Lecturer Support	Head of Study Program, and Lecturer Support
		Implementation monitoring Curriculum	Faculty Leader, Head of Study Program, QA	Curriculum Unit
		Periodic evaluation learning implementation	Head of Study Program, QA	Curriculum Unit

EXITING DPAS PROFILE

The initial step taken in the reconstruction of the DPAS curriculum is to conduct a SWOT analysis of strengths, weaknesses, opportunities and challenges and tracer studies and CSI (Community Satisfaction Index). The aim is to provide a descriptive picture of the current and future DPAS situation. DPAS has the strength (strength) most of the lecturers have the qualifications of professor (22 people). Based on the AIM cycle 19, it can be said that the qualifications of teaching lecturers have a score of 4, because

they exceed 80% of the total lecturers. 22 people are professors. The development of lecturer competence is carried out by conducting an assessment of engineering professionals. The achievements of lecturer development show that in 2018 there were 9 lecturers who received international certification with a professional certified engineer 11 lecturers. The impact of competence shows the high dedication of Higher Education Tri Dharma activities, increased publication ranking, increased book writing and community service, as well as intensive guidance to produce graduates with an average GPA of 3.9. 100% of graduates are staff of the home institution and make a positive contribution to the sending institution. The results of the analysis of CSI (Community Satisfaction Index) conducted by PPID (Information Processing and Documentation Officer) UB.

In an organization progress is not only seen from an increase in achievement. The progress of DPAS is supported due to the evidence finding of the weakness of an organization, in this case DPAS has a weakness, namely the lack of equitable publications in reputable international journals, the length of study is still an average of 4.0 years while the national standard for DPAS are expected to carry out the educational process and graduate within 3 years, another weakness is the fluctuating doctoral interest.

Internal changes: Changes in the service system encourage internal changes, including the pattern of the administration system. Online services by academic staff must undergo a change in software use skills. DPAS provides technical training to improve IT skills. The conclusion of the change in QMS (Quality Management System) is only in the teaching and learning process.

The threat to DPAS is that interest in pursuing doctoral education is still low, because what requires the majority of education is education that supports careers where students have worked. However, this threat becomes an opportunity because several masters graduates are interested in continuing to doctoral programs. After the results obtained from the SWOT analysis, tracer study, and CSI are to determine the profile of graduates, learning outcomes and studies to achieve learning outcomes. Education is carried out using the Semester Credit System (SCS).

The education system, student study load and DPAS curriculum are programmed in the form of a semester credit system, which is an education administration system

using semester credit units (credits) to state the student study load, lecturer workload, learning experience, and program implementation burden.

RELEVANCE OF DEMANDS AND NEEDS STAKEHOLDERS

Tracer study shows that the 2023/2024 curriculum is relevant to some of the demands and needs of stakeholders. Nevertheless, it is necessary to harmonize and develop a curriculum that is in accordance Regulation of the Minister of Education and Culture Number 53 of 2023 concerning Quality Assurance of Higher Education. The formulation of an Outcome Base Learning (OBE)-based curriculum has been carried out by DPAS in the 2023/2024 academic year. Graduates of DPAS are expected to achieve the attitudes, knowledge and skills formulated in the achievement of spending on courses and dissertations and it is hoped that the abilities and knowledge gained have an impact on solving problems in society. Based on Law no. 2 of 2012 (Article 15) on quality assurance. Postgraduate program education is education directed at mastering and developing branches of science and technology. Therefore DPAS intended to produce graduates who are able to discover, create and/or contribute to the development of science and technology through scientific reasoning and research. Strengthening students to be wiser by increasing their ability and independence as philosophers and/or intellectuals, cultured scientists and producing and or developing theories through comprehensive and accurate research to advance human civilization.

TRACER STUDY RESULTS

Student Data

The number of respondents is 20 people. Based on the results of the questionnaire, it was found that the students of the DPAS. Figure 1. Most of fresh DPAS graduates back to their institution as a scientist or academic researcher, trainer in research center and development in livestock industry. Figure 2. Professional destination of DPAS Graduates is 40% higher position and 53% new position.

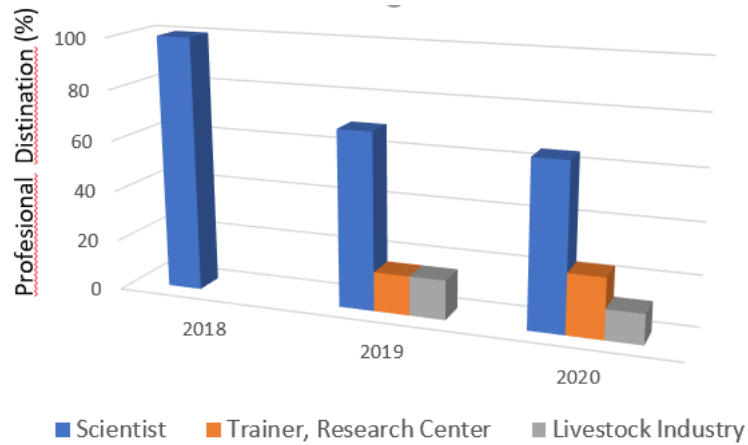


Figure 1. Professional Destination of DPAS Graduates

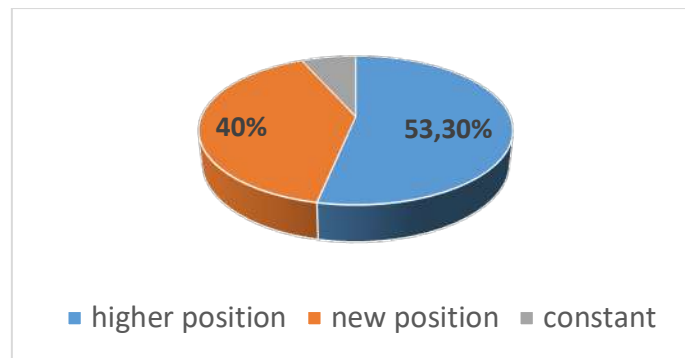


Figure 2. Exploring the career destinations of doctoral graduates

Surveys to alumni and stakeholder are utilized to determine the suitability of materials and needs required by DPAS students. Some of the questions given to alumni and graduate users are related to the courses offered along with input related to the depth of the material, questions related to the need for soft skills outside of academics, satisfaction with facilities including library facilities, IT facilities, research facilities, practicum facilities, library suggestions (accessible both offline and online) and study room facilities. Table 2. shows the response of stakeholders to academic services DPAS. Some inputs from alumni and stakeholder for improving the teaching and learning process are:

- Learning materials that must be up to date;
- Empathy for students;

- Need to add credits for practicum held in molecular/biology laboratories as an effort to increase of research effectiveness;
- Need to be improved again related to the development of networking by inviting stakeholders.

All inputs from students, alumni and stakeholder are accommodated, reviewed and action is taken to improve the quality of existing services. In addition, input from students, alumni and stakeholders is also used as a consideration in preparing the curriculum to ensure graduates who have comprehensive competencies in accordance with the graduate profile (scientist and policy maker).

Table 1. Stakeholders's responses to academic services at DPAS

Competence	DPAS	
	S	VS
Curriculum	24	76
Compulsory courses	18	82
Elective courses	25	75
Practice	21	79
Structured Tasks	25	75
Field study	33	87
Lecturer competence in teaching	5	95
Lecturer competence in guiding	7	93
Learning facilities	12	88
Practice facilities	13	87
Research facilities	17	83
Library facilities	16	84
IT facilities	15	85
Study room facilities	20	80

Note: VS: Very satisfied; S: satisfie; The number is in percentage (%)

FAS provides opportunities for the entire academic community and the public to obtain information and transparency needed in managing public resources. All information Recommendation Some expectations and recommendations from students for process improvement teaching and learning are: 1) Laboratory facility improvement to support DPAS student research. 2) Fostering academic writing for international publication.

ALUMNI AND STAKEHOLDER DATA

The number of respondents is 20 people, Fields of work of alumni and stakeholders are grouped into 3, namely: College/School or university, Research Center/ Ministry of

Agriculture, Industry Livestock, Entrepreneur, and others. Percentage of occupations that carried out by alumni of PDAS is presented in Figure 1.

CONCLUSION OF TRACER STUDY

Based on the descriptive analysis of the tracer study data above, the profile is determined Graduates of DPAS are Scientists and policy maker

PART III

FORMULATION OF LEARNING OUTCOME DOCTOR PROGRAM ANIMAL SCIENCE

PROCESS OF LEARNING OUTCOMES FORMULATION

Indonesia Quality Assurance Framework considerations are the determination domain of intended learning outcome (ILOs) are (1) attitudes, (2) knowledge, (3) skills special skills, and (4) general skills, but also added on consideration learning outcomes of study programs which are generally determined by the institution international accreditation. The ILOs must also be in line with the objectives of the study program measurable, and the profile of the graduates of the study program (graduate attribute) determined by each study program.)

Preparation of ILOs based on several considerations from stakeholders, UB, and faculties both from lecturers, education staff, students, alumni, graduate users and international accreditation guidelines AQAS (Agency for Quality Assurance through the Accreditation of Study Programs). The formulation of the ILOs of DPAS through several stages: includes curriculum evaluation, and curriculum development. Curriculum evaluation includes on-going curriculum evaluation activities through surveys on study program, lecturers and students. Followed by doing Tracer Study of graduate users and stakeholders, then carry out Socialization of the IQF concept, Content Standards and High Education Nasional Standard Process Standards and Basic Materials Studies by the Study Program Curriculum Development Team, Head of DPAS, and postgraduate lecturer. The curriculum development team includes the Preparation of Graduate Profiles, Preparation of ILOs and Determining the ILOs are evaluated every four years in order to adapt to the latest technological developments, rules/policies government, stakeholder demands and national and international accreditation.

EDUCATIAN OBJECTIVES

Produce doctoral graduates who have the following competencies and qualifications:

1. Having noble ethics, having the spirit of Pancasila, and having high integrity and scientific spirit as well as being sensitive, open and responsive to the

- development of science and technology for solving problems in the livestock sector;
2. Having a graduate profile as a researcher and expert in the field of animal science; as a developer of science and technology, and as a policy maker;
 3. Able to design, perform, develop and apply the latest science and technology in accordance with the demands of society;
 4. Able to publish scientific works both nationally and internationally recognized by the scientific community in order to provide an active role and contribution to the development of science and technology broadly.
 5. Able to develop cooperation with other agencies both at home and abroad and implement it responsibly, dynamically and sustainably.

GOALS AND STRATEGIES

The DPAS sets four strategic issues as the main targets, namely (1) the competence of graduates who have independence in thinking and developing science and technology, (2) the relevance and quality of research, who play an active role in conducting innovative research independently or in groups, (3) the quality of community service, which is always creative in serving and applying science and technology according to the needs of the community dynamically; and (4) institutional cooperation, cooperation with other parties at home and abroad. The strategy for achieving and developing the four strategic issues is translated into four areas which include: (A) Education and Student Affairs Development, (B) Research Development, (C) Community Service Development, (D) Institutional Cooperation Development.

GRADUATE PROFILE

The DPAS has a program to create graduates with the following profile:

1. As a researcher and developer of science and technology with quality, integrity, and responsibility and able to implement and communicate scientific work at national and international levels to solve problems in society and play an active role in the development of science and technology.
2. As experts in policy maker.

FORMULATING LEARNING OUTCOMES

Table 2. Standard qualification for DPAS graduate at level 9. The Implementation in Curriculum Preparation in DPAS refers to the Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 73 of 2013 concerning the Implementation of the IQF for Higher Education and the Ministry of Research 3 of 2020 as shown in Table 2:

Table 2. Description of IQF level 9

Description of IQF Level 9	
1	Capable of cultivating new knowledge, technology, or/and art within her/his expertise's or professional domain through research; producing creative, original and reputable creations
2	Capable of solving science, technology or/and art problems within her/his scientific expertise through inter-, multi- and trans-discipline approach.
3	Capable of organizing, leading and cultivating research and development useful to science and valuable to human civilization as well as obtain national and international recognition.

The review of the DPAS curriculum which was carried out in the 2023/2024 Academic Year, resulted in a curriculum that was valid in the 2023/2024 odd semester, changes to learning study materials. This review is in accordance with level 9 learning outcomes referring to PP number 8 of 2012 concerning IQF. Reconstruction of the curriculum in the 2023/2024 academic year, is to refine it on the basis of the following considerations:

1. Adjustment to developments in science and technology that occur continuously.
2. Increasing scientific specifications for participants in accordance with stakeholder input.
3. Readjustment and implementation of Permendikbudristekdikti No. 53 of 2023 concerning Quality Assurance in Higher Education
4. Improving the quality and efficiency of PS-DIT management
5. Adjustment to international accreditation recommendations implemented in 2023

PS-DIT equalizes the number of semester credit units with the European Credit System (ECTS) to improve the quality of learning on an international level. So the supporting normative instrument or reference is Permendikbudristekdikti No. 53 of 2023 concerning Quality Assurance in Higher Education, which states that the number of credits that must be taken by the Doctoral Program is 62-84 credits so that the study load for the Animal Science Doctoral Program has a total of 65 credits. The number of credits includes 23 credits of lectures and 42 credits of Final Assignment or dissertation which consists of several components as follows: qualification exam (2), proposal commission hearing (3), proposal exam (3), results commission hearing (2), closed exam (3), open examination (3), research implementation (12), publication 1 (6) and publication 2 (6). One credit is determined based on the course load which includes face-to-face lectures, structured assignments and independent assignments which is equivalent to 300 minutes per week, making it 80 hours per semester consisting of 16 weeks. Meanwhile, one ECTS in Germany is equivalent to 30 hours. Convert credits to ECTS (80:30).

Education Background	sks			ECTS
	Coursework	Disertation	Total	
Linear Program Study	23	42	65	173,33

Student academic activities in completing the study load independently. The outline consists of lecture and dissertation activities, where the weight of each activity is measured in semester credit units or credits, which are described as follows.

1. Lecture activities

Lecture activities are mainly carried out in the first semester with a total of 23 credits for participants with a master's degree (S2). Lecture activities consist of lectures and structured assignments. Courses consist of mandatory courses and elective courses. Compulsory courses must be taken by all PS-DIT FPt UB students, while the elective courses taken by students are tailored to their interests and dissertation research topics. The elective courses taken by students can be courses held by other study programs at the discretion of the Program Chair or with the approval/assignment of the Promoter. The number of face-to-face meetings for each course is held 16 times per semester.

2. Dissertation Activities

Dissertation activities consist of a activities is 42 credits consisting of the following components: qualification exam (2), proposal commission hearing (3), proposal exam (3), results commission hearing (2), closed exam (3), open examination (3), research implementation (12), publication 1 (6) and publication 2 (6).

CURRICULUM RELATIONSHIP WITH FACULTY GOALS

The DPAS curriculum is an implementation of educational goals as stated in the Academic Handbook where the purpose of education is to produce professional doctors who fear God Almighty, have a Pancasila spirit, master scientific basics and skills in the field of animal Sciences, are able to apply science and technology in the field of animal Sciences, able to work in the field of animal Sciences, able to behave and behave in social life, and able to always follow the development of science and technology in the field of animal Sciences. The role of Doctors in the field and the demands of technological developments, graduates of DPAS are expected to have profiles as: Researcher and policy maker.

The achievement of the profile can be achieved by several categories of learning outcomes including the main competencies, supporting competencies and other competencies. Learning Outcomes for each semester are formulated in Figure 3. The types of competencies that must be presented are in Table 3. The length of study to complete Education at DPAS can be taken for 6 semesters and a maximum of 14 semesters. In semester I and II, DPAS students can take lectures by programming compulsory and elective courses (according to interests), students are

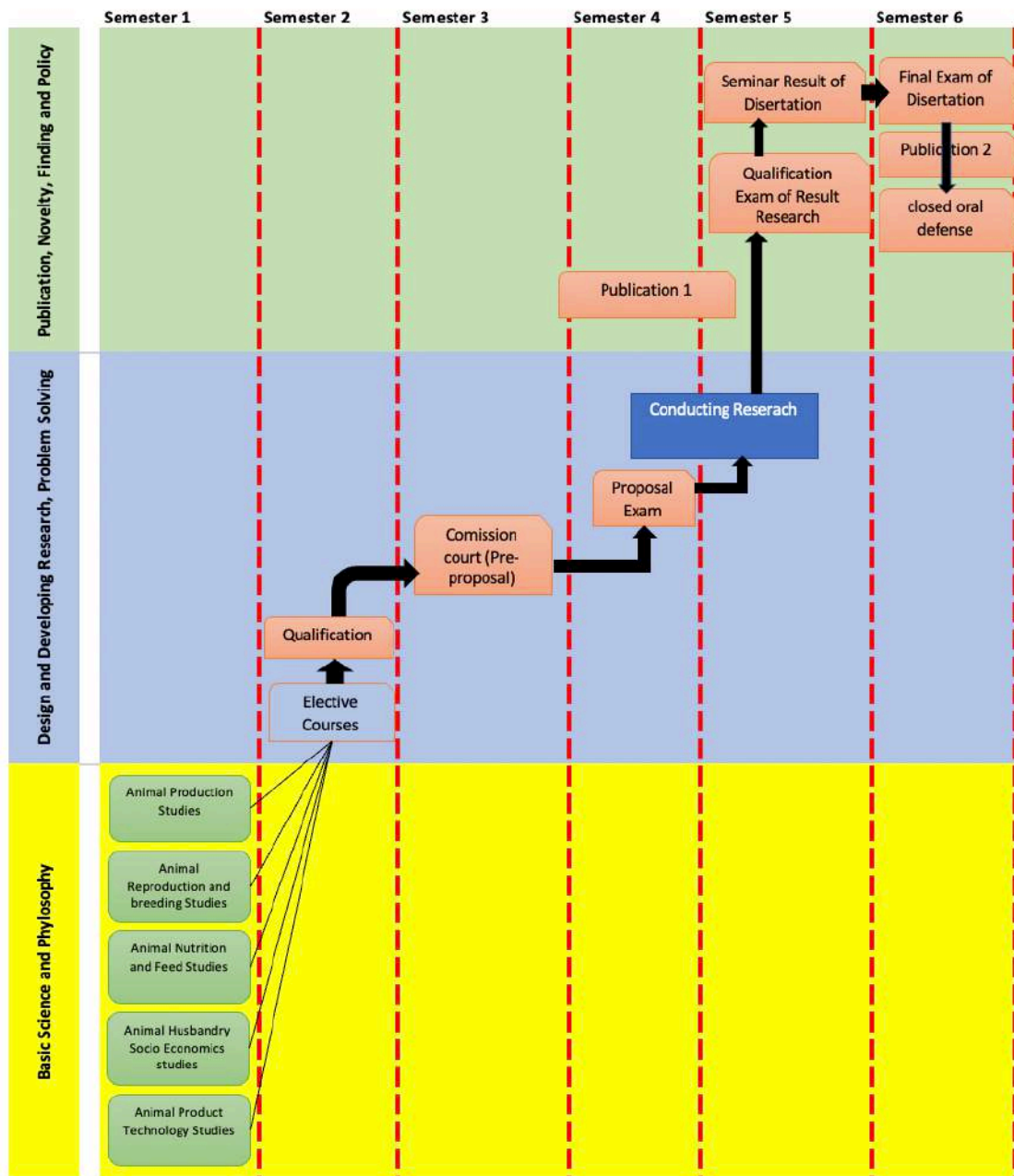


Figure 1. Learning outcomes for each semester

Table 3. Intended Learning Outcome

COMPETENCE	LEARNING ACHIEVEMENTS			
	ATTITUDE COMPETENCE	KNOWLEDGE COMPETENCE	GENERAL COMPETENCY	SPECIAL SKILL
MAIN COMPETENCES	ILO1 Able to intervene in livestock issues at the macro level	ILO2 Mastering the theoretical philosophy in the field of animal Sciences that is relevant to intervention in livestock problems	ILO3 Able to expand and deepen new livestock theory through multi and transdisciplinary approaches to contribute to the achievement of the vision and mission of DPAS FAS UB.	ILO4 Able to contribute in the formulation of policies related to social welfare at the macro level through livestock development
SUPPORTING COMPETENCY		ILO5 Finding or developing scientific theories/conceptions/ideas, and contributing to the development and practice of science and/or technology in the field of animal Sciences based on scientific methodologies, logical, critical, systematic, and creative thinking	ILO6 Develop a research roadmap with an inter, multi, or transdisciplinary approach, based on a study of the main research objectives and relationships with broader objectives	ILO7 Compile a dissertation based on the results of in-depth, multi- or transdisciplinary research that has been carried out including theoretical and/or experimental studies in the fields of science, technology, art and the resulting innovations
			ILO8 Publish the results of research in the field of science in scientific journals that are accredited nationally and internationally, unless there are special restrictions from the grantor of research that require data security and confidentiality	ILO9 Choose appropriate, current and advanced research and provide benefits to mankind through an inter, multi, or transdisciplinary approach, to develop and/or produce problem solving in the fields of science, technology, and art,
COMPETENCE	LEARNING ACHIEVEMENTS			
	ATTITUDE COMPETENCE	KNOWLEDGE COMPETENCE	GENERAL COMPETENCY	SPECIAL SKILL
OTHER COMPETENCES	ILO10 Demonstrate academic leadership and develop collegial relationships in managing, developing and fostering resources and organizations under their responsibility as well as communities outside the institution			

allowed to take courses in other study program to support research with the recommendation of the Promoter and Head of DPAS. The learning objective at semester I and II provide basic concepts and development of knowledge and science. Semester III, IV and V conduct research and publication.

GRADUATE PROFILES AND GRADUATE COMPETENCIES

The graduate profile contains the roles that are expected to be carried out by graduates of the study program in society/the world of work. This profile is *outcome* which is the goal of the DPAS study program. The graduate profile that has been set in DPAS is a guarantee of learning achievement for prospective students during the learning process according to the profile in DPAS, namely researchers and policy makers. The competency matrix and profile of DPAS graduates are presented in Table 4.

Table 4. Competency matrix, profile of DPAS-FPt UB graduates

Learning Outcomes	ILOs	Competence	Researcher (Researcher)	Policy makers
Main Competencies		Attitude competence:		
	ILO1	Able to intervene in livestock issues at the macro level	o	o
		Knowledge competence		
	ILO2	Mastering the theoretical philosophy of the relevant livestock field to intervene in livestock problems	o	o
		General competence		
	ILO3	Able to expand and deepen new livestock theory through multi and transdisciplinary approaches to contribute to the achievement of the vision and mission of DPAS FPt UB.	o	o
		Special competence		
Supporting competence	ILO4	Able to contribute in the formulation of policies related to social welfare at the macro level through livestock development		o
		Knowledge competence		
	ILO5	Finding or developing scientific theories/conceptions/ideas, and contributing to the development and practice of science and/or technology in the field of animal Sciences based on scientific methodologies, logical, critical, systematic, and creative thinking	o	o
		General competence		
	ILO6	Develop a research roadmap with an inter, multi, or transdisciplinary approach, based on a study of the main research objectives and relationships with broader objectives	o	
	ILO7	Compile a dissertation based on the results of in-depth, multi- or trans-disciplinary research that has been carried out including theoretical and/or experimental studies in the fields of science, technology, art and the resulting innovations	o	o

	ILO8	Publish the results of research in the field of science in scientific journals that are accredited nationally and internationally, unless there are special restrictions from the grantor of research that require data security and confidentiality	o	
		Special Skill Competence		
	ILO9	Choose appropriate, current and advanced research and provide benefits to mankind through an inter, multi, or transdisciplinary approach, to develop and/or produce problem solving in the fields of science, technology, and art,	o	
Other competencies		Other competencies		
	ILO10	Demonstrate academic leadership and develop collegial relationships in managing, developing and fostering resources and organizations under their responsibility as well as communities outside the institution	o	

CURRICULUM STRUCTURE AND CONTENT

Changes in the 2021 curriculum to 2023/2024 curriculum. Further reconstruction in 2023 is shown in Table 5. The DPAS curriculum adapts to technological developments and stakeholder needs. The content of the DPAS curriculum includes the integration of cognitive, psychomotor and affective aspects. The weighting is related to the number of credits that cover the three aspects that are balanced. The DPAS curriculum is designed based on the objectives, scope, depth of material, and organization that leads to the formation of hard skills and soft skills that can be applied in various situations and conditions. In general, the scope of the curriculum includes:

1. Competence
2. Learning material/content
3. Learning Resources
4. Learning strategies and methods
5. Study load and period
6. Learning outcomes evaluation system

The study program is the main person responsible for creating, developing, revising, and implementing the curriculum. The Faculty Senate is the main person responsible for determining the effectiveness of curriculum implementation at the Faculty level. The result of curriculum reconstruction that adapts to the development of science and technology is the change of courses in DPAS according to the following Table 5:

Table 5. Reconstruction of DPAS

No.	Course	Old/ new course	Change on		Reason of Review	At suggestion of	Start on semester
			Silabus	Book			
(1)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Philosophy of Science and scientific work	old	V	-	Enrichment of teaching materials and adaptation to KKNI level 9 competencies	Lecturers, Alumni and Users	Odd 2016/2017
2	Research ethics	New			Compulsory University Courses refer to regulation of ministry of education, culture, research, and technology Number 53 of 2023 concerning Quality Assurance in Higher Education	regulation of ministry of education, culture, research, and technology and Rector Regulation Universitas Brawijaya	Odd 2025/2026
3	Development in Livestock Technology	New			Enrichment of teaching materials and adaptation to KKNI level 9 competencies	Lecturers, Alumni and Users	Odd 2025/2026
4	Research Methods and Scientific Work	New			Compulsory University Courses refer to regulation of ministry of education, culture, research, and technology Number 53 of 2023 concerning Quality Assurance in Higher Education	regulation of ministry of education, culture, research, and technology and Rector Regulation Universitas Brawijaya	Odd 2025/2026

No.	Course	Old/ new course	Change on		Reason of Review	At suggestion of	Start on semester
			Silabus	Book			
(1)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
5	Literature Review	New			Enrichment of teaching materials and adaptation to KJNI level 9 competencies	Lecturers, Alumni and Users	Odd 2025/2026
6	Animal Welfare and ethics	New			Input international accreditation and enrichment of teaching materials and adjustments to KJNI level 9 competencies	International accreditation assessors, lecturers, alumni and users	Odd 2025/2026
7	Science and Study of Animal Production	old	V	-	Adapted to KJNI level 9 competency and scientific developments	Lecturers, Alumni and Users	Odd 2016/2017
8	Science and Study of Animal Reproduction and Breeding	old	V	-	Adapted to KJNI level 9 competency and scientific developments	Lecturers, Alumni and Users	Odd 2016/2017
9	Science and Study of Nutrition and Animal Feed	old	V	-	Adapted to KJNI level 9 competency and scientific developments	Lecturers, Alumni and Users	Odd 2016/2017
10	Science and Socioeconomic Study of Animal Husbandry	old	V	-	Adapted to KJNI level 9 competency and scientific developments	Lecturers, Alumni and Users	Odd 2016/2017
11	Science and Technology Study of Animal Products	old	V	-	Adapted to KJNI level 9 competency and scientific developments	Lecturers, Alumni and Users	Odd 2016/2017

Table 6. Course Matrix (CM) with Learning Outcomes

No	Course * (Compulsory)	credit	Program Learning Outcome										Total	%
			PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10		
1	Philosophy of Science and scientific work	3	↑	↑	↑	↑	↑						5	
2	Research ethics	3	•	•	•	•	•						5	
3	Development in Livestock Technology	3	•	•	•	•	•						5	
4	Research Methods and Scientific Work	4					•						3	
5	Literatur Review	3					•	•					3	
6	Animal Welfare dan Ethics	3												
	Sub Total	20												
	(*Elective)													
I	Science and Study of Animal Production	2	•	•	•	•	•	•					6	6,81
2	Science and Study of Animal Reproduction and Breeding	2	•	•	•	•	•	•	•	•	•	•	10	8.88
3	Science and Study of Nutrition and Animal Feed	2	•	•	•	•	•						5	5,68
4	Science and Socioeconomic Study of Animal Husbandry	2	•	•	•		•						4	4,54
5	Science and Technology Study of Animal Products	2	•	•	•		•						4	4.54

SYLLABUS AND COURSE LEARNING OUTCOMES (CLO)

The syllabus of courses in DPAS is listed as follows Table 7:

Table 7. The syllabus of courses in DPAS

No	Courses	Description and Course Learning Outcomes
Compulsory Course		
1		<p>Philosophy of Science and Scientific Writing (3 X 0 credits)</p> <p>Description Reviewing and providing an understanding of the philosophy of science and theory of truth, describing critical thinking-analysis of knowledge to be reasoned deductively and inductively, understanding the nature and meaning of research, as well as strategies for preparing proposals and research reports that are reliable based on the principles of writing scientific papers that are good and right</p> <p>CLO</p> <ol style="list-style-type: none"> 1. Students are able to think critically, creatively and analyze the truth of theories based on the philosophy of science 2. Students are able to reason with the knowledge obtained and make deductive and inductive conclusions 3. Students are able to prepare proposals and dissertation research reports according to their nature and meaning 4. Students are able to write good and correct scientific papers, and have a commitment to norms and ethics in scientific studies
2		<p>Research Methods and Scientific Work</p> <p>Description The Research Ethics course focuses on developing skills and knowledge in research methods and writing scientific papers. The aim of this course is to equip students with the ability to design, carry out and evaluate research relevant to the field of study.</p> <ol style="list-style-type: none"> 1. Students are able to explain various paradigms, methods and research techniques that are relevant to the field of study 2. Students are able to collect, analyze and interpret data critically and systematically. 3. Students are able to write scientific papers that meet international publication standards 4. Students are able to develop strategies for disseminating research results that can increase the impact of their research outside the academic community.
3		<p>Research ethics</p> <p>Description This course covers various aspects of research ethics including scientific integrity, the rights and welfare of research subjects, plagiarism, conflicts of interest, and ethical scientific publications and writing. Through this course, students are expected to be able to identify and overcome ethical issues that arise in conducting research, as well as develop professional attitudes and social responsibility as researchers.</p> <ol style="list-style-type: none"> 1. Students are able to explain the basic concepts and principles of research ethics, including integrity, transparency and accountability in scientific research. 2. Students are able to identify and analyze various ethical issues that may arise in the context of research in the field of animal science, and provide appropriate solutions. 3. Students demonstrate the ability to avoid and overcome plagiarism, data fabrication, and manipulation of research results, and understand the

		<p>importance of honest and transparent publications.</p> <p>4. Students are able to write and publish research results in an ethical manner, including appropriate recognition of the contributions of all parties involved in the research.</p>
4		Literature Review
		<p>Description</p> <p>The Literature review course is designed to equip students with critical skills in searching, evaluating, and synthesizing scientific literature relevant to their research topic. Students will learn techniques for identifying credible sources, evaluating research quality, and organizing information systematically to support the theoretical framework and research methodology</p>
		<ol style="list-style-type: none"> 1. Students are able to understand and master basic concepts and main theories that are relevant to the field of study being researched. 2. Students are able to analyze and critically evaluate existing literature, including understanding the strengths and weaknesses of research methods used in previous studies 3. Students are able to prepare a comprehensive and systematic literature review that supports the theoretical framework and research methodology 4. Students are able to integrate various perspectives and findings from the literature to develop new, innovative hypotheses or conceptual models.
5		Animal Welfare and Ethics
		<p>Description</p> <p>This course discusses various aspects of livestock welfare including the five freedoms of livestock, methods and indicators for assessing livestock welfare, intrinsic and extrinsic factors that influence livestock welfare (genetics, environment, management and interaction with humans), ethical theories and principles in various contexts before experiments were carried out on animals and livestock, regulations and legislation related to national and international livestock welfare as well as the application of technology to improve livestock welfare in an effort to make livestock living comfortably (friendly animal housing) to make livestock healthy, happy and productive.</p>
		<p>CLO</p> <ol style="list-style-type: none"> 1. Students are able to apply the concept of animal welfare and ethics, the five freedoms related to the implications of ethical guidelines in research design on the use of experimental animals and livestock as a moral responsibility for management and the production process as a whole. 2. Students are able to apply ethical principles in the five freedoms of livestock for livestock comfort (friendly animal housing) in an effort to increase livestock productivity 3. Students are able to understand and apply the livestock welfare monitoring and assessment system, the role of the Animal Welfare Officer (AWO) and Animal Ethical Clearance (Ethical Commission for Research on Experimental and Livestock Animals)
6		Development in Livestock Technology
		<p>Description</p> <p>The Animal Technology Development course is designed to introduce and explore the latest technology in animal husbandry which can increase the efficiency, productivity and sustainability of the animal husbandry system. This course is expected to improve students' competence to explore various innovations and applications of technology in the fields of livestock production, animal feed nutrition, livestock product processing technology, livestock reproduction technology, social economics of animal husbandry and ethical issues of animal husbandry sustainability.</p>
		<ol style="list-style-type: none"> 1. Students are able to explain the basic concepts and principles of the latest technology in the field of animal husbandry. 2. Students are able to analyze and evaluate innovations in livestock

		<p>production, animal nutrition and feed, livestock product processing technology, livestock socio-economics and livestock reproduction technology.</p> <ol style="list-style-type: none"> Students are able to analyze and evaluate technology to implement livestock welfare. Students are able to analyze and evaluate issues of ethics and sustainability of animal husbandry through innovative technology.
Elective course		
1		<p>Animal Production Studies (3 X 0 credits)</p> <p>Description The subject of Livestock Production System Science and Studies aims to provide an understanding of livestock production system policies as an aspect of national development studies in terms of fulfilling food adequacy of animal origin in terms of current scientific and technological principles as well as overall achievement methods. Discussion and emergence of ideas or innovations using basic knowledge of concepts, scientific theory is needed as a basis for reviewing regulations that apply to national development goals, logical prospective studies and follow-up on weaknesses and strengths of livestock production systems</p> <p>CLO</p> <ol style="list-style-type: none"> Able to formulate problems, formulate hypotheses, and research methods of livestock production according to the field of science that is occupied. Able to conduct a written study of the policy of the livestock production system in national development which aims to fulfill the adequacy of food originating from livestock. Students are able to collect, process data and interpret the results logically and systematically written in scientific language
2		<p>Animal Reproduction and Breeding Studies (3 X 0 credits)</p> <p>Description This course discusses the concepts of Reproductive Science and Livestock Breeding including the implementation of Reproduction in livestock development and population, the role of Reproductive Technology for increasing livestock productivity, Overcoming reproductive disorders for increasing livestock populations, implementing breeding designs/programs in improving genetic quality and livestock performance, the role of breeding programs in the management of livestock genetic resources, genetic quality improvement strategies for several important traits in livestock and implementation of biotech in livestock breeding</p> <p>CLO</p> <ol style="list-style-type: none"> Mastering the basic concepts of the study of Animal Reproduction and Breeding Able to apply strategies for utilizing reproductive technology and livestock

CURRICULUM IMPLEMENTATION STRATEGY

The curriculum implementation strategy is a step to ensure that the curriculum can be implemented in accordance with the planning and lead students to achieve the learning outcomes that have been formulated, there are four implementation strategies, namely

1. Focus on learning achievement that has been formulated
2. Ensuring the fulfillment of learning rights for 6-14 semesters, students get learning experiences with additional competencies that are related to the ILOs study program for the DPAS
3. Students get a real-world learning experience according to their profile or scope of work.
4. The curriculum designed and implemented is flexible and able to adapt to the development of science and technology (scientific vision) and the demands of the field of work (market signals).

LEARNING PROCESS

1. Online Learning to Facilitate the Learning Process in a Pandemic

The DPAS learning program allows students to carry out distance learning activities in accordance with the Independent Learning Guidebook-Independent Campus, this guide can be used as a normative guide and reference to carry out the learning process in DPAS. Teaching and learning activities as listed in the Semester Learning Plan (SLP).

1. Process of Academic and Guidance Services

During the education process, students have the right to fulfill academic services and remote guidance both by academic staff, course supervisors and supervisors in this case promoters and co-promoters.

2. Learning Assessment

Learning Assessment is described completely in other document Assessment of Learning Outcome.

