# CURRICULUM OVERVIEW

## BACHELOR PROGRAM IN ANIMAL HUSBANDRY

## FACULTY OF ANIMAL HUSBANDRY, MARINE AND FISHERIES

## UNIVERSITAS NUSA CENDANA

## KUPANG

## A. OBJECTIVES OF THE DEGREE PROGRAM

### 1. VISION OF UNIVERSITY

**“Global Oriented University”**

### 2. MISSION OF UNIVERSITY

### 3. VISION OF THE FACULTY

1. Producing graduates with integrity, competence and relevance to the development of animal science and technology and the needs of society so that they become agents of change who are able to compete globally.
2. Improve the competence of internal resources for the implementation of quality higher education.
3. Increase the role of the livestock study program in solving dryland livestock development problems through increased research capacity and innovation.
4. Increasing the role of animal husbandry study programs in improving the welfare of the community through increasing the capacity of down streaming and dissemination of science and technology of dryland animal husbandry.

### 4. MISSION OF THE FACULTY

1. Organizing quality education and teaching that is relevant to the development of science and technology in the field of animal husbandry and the needs of the community, especially in drylands.
2. Organizing quality research in the field of dryland animal husbandry to develop and disseminate science and technology in an effort to produce human resources that are adaptive and innovative to the demands of science and technology developments and the demands of society and published in national and international accredited journals.
3. Organizing quality community service that is relevant to the development of science and technology in the field of dryland animal husbandry and in accordance with the needs of the community.

## B. PROGRAM EDUCATIONAL OBJECTIVES (PEO)

Program Education Objectives of the Animal Husbandry Study Program are to produce graduates who become managers, Community empowers, Technopreneurs and Scientists early at the beginning of their career. The program provide opportunity for graduates to be able to: to manage organizations, Capable in organizing, building and empowering communities to increase their economy, developing enterprises in farming based on research and innovation, Able to develop research and innovation in solving problems which related to animal husbandry as well as scientific advancement

The relationship between courses and qualification profile to rich the PEOs is shown in figure 1 below.

## C. PROGRAM LEARNING OUTCOME

General procedures of graduate profile formation, learning outcome, and curriculum of study program have been in accordance with the standard (from guidelines of curriculum development, such as Higher Education and Profession Association, KKNI, Accreditation Bureau, and Association Profession of Study Program) as presented in Figure 2 and verified by academic board of faculty. The procedure involves both internal and external stakeholders,

including academic staff, university and faculty supporter, alumni, students, experts, and external stakeholders

Fig. 2. Mechanism scheme of program learning outcome

Learning outcomes of Bachelor degree of Animal Husbandry study program

| Area | Code | Program learning outcome |
|---|---|---|
| Attitude | PLOs 1 | Uphold the cultural values of the nation and commit to professionalism and ethical values |
| Knowledge | PLOs 2 | Master the theoretical concepts of science in the field of farming especially in the dry land environment of the islands |
| General Skills | PLOs 3 | Able to conceptually plan the productivity of farms and increase the added value of farm products through dissemination of knowledge |
| | PLOs 4 | Able to think critically in solving problems based on valid data and information, responsibly, independently |
| | PLOs 5 | Able to lead, work in a team and in a heterogeneous and challenging social environment |
| Specific Skills | PLOs 6 | Able to use technology information to improve the effectiveness and efficiency in planning, implementation and evaluation of farming development activities. |
| | PLOs 7 | Able to design solutions based on the principles of scientific knowledge to respond to problems and needs in the field of farming of dry land of the islands |
| | PLOs 8 | Able to implement and evaluate new findings and engineering of farm production based on the |

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| | | principles of effectiveness, efficiency, quality, and sustainability |

Fig. 3. Mechanism scheme of program learning outcome

Subject-specific criteria are developed based on the classification of Animal Husbandry study program body of knowledge and its PLO during the course determination. The description of Subject-Specific Criteria (SSC) for the Animal Husbandry Study Program is presented below:

Table. 3. SSC of Animal Husbandry Study Program

| SSC (Subject Specific Criteria) | | |
|---|---|---|
| Attiduce | SSC1 | Have gained knowledge of the latest findings in their discipline |
| | SSC2 | Be able to understand the concepts of identification and safeguarding of quality in their respective fields of work; |
| | SSC3 | Have the ability to know the essential legal regulations relating to their discipline; |
| | SSC4 | Be aware of the further multidisciplinary context of agriculture, forestry, food science, or landscape architecture and related fields. |
| Specialist competences | SSC5 | Have gained the required knowledge and understanding to identify and formulate problems arising in agriculture, forestry, food science, or landscape architecture (which may contain aspects stemming from areas other than their field of specialization); |
| | SSC6 | Are able to apply different methods orientated on fundamentals – such as mathematical, statistical, and experimental (laboratory) analysis; |

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| | SSC7 | Are qualified to plan and conduct respectively suitable experiments, interpret the data, and draw conclusions. |
| | SSC8 | |
| Social competences | SSC9 | Be able to work efficiently on their own and as team members |
| | SSC10 | Are qualified to apply different methods to communicate effectively with the scientific community and the society as a whole |
| | SSC11 | Feel obliged to act in accordance with professional ethics and the responsibilities and standards of practical engineering |
| | SSC12 | Are aware of the methods of project management and business practices such as risk and change management and understand their limitations |
| | SSC13 | Recognized the necessity of independent life-long learning and are qualified to do so |
| | SSC14 | Depending on the professional field they have competences in the fields of management and marketing, in particular project management, acquisition, personnel management, controlling etc |
| | SSC15 | Are adequately competent in the area of communication, e.g. Presentations or moderation |

Fig. The relevance between PLO and SCC is presented below:

| | SSC1 | SSC2 | SSC3 | SSC4 | SSC5 | SSC6 | SSC6 | SSC7 | SSC8 | SSC9 |
|---|---|---|---|---|---|---|---|---|---|---|
| PLO1 | | | | | | | | | | |
| PLO2 | | √ | | √ | | | | √ | √ | |
| PLO3 | | | √ | | | | | | | √ |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| PLO4 | | | | | | √ | √ | | | |
| PLO5 | √ | | √ | | √ | | | | | |
| PLO6 | | | | | | | | √ | √ | √ |
| PLO7 | √ | | √ | | √ | | | √ | √ | √ |
| PLO8 | √ | | √ | | √ | | | | | |

**PROGRAM STRUCTURE**

The contents of curriculum in Animal Husbandry study program are designed to realize the vision, mission, goals, and objectives of the Animal Husbandry Study Program, Faculty of Animal Science, Marine and Fisheries Universitas Nusa Cendana. It is made to meet the expected outcomes, formulated based on input and intensive communication with stakeholders, such as industrial and governmental institutions, and has generated quality graduates.
The structure of curriculum has been designed and aligned with the Program Learning Outline (PLO). The details of curriculum structure mapping towards PLO attainment can be seen in Table 5 There is a correlation to the expected competency for each course for the graduates, as given in the competency map (Figure 5). In the curriculum mapping, every course supports specific competencies. The curriculum of the programs has undergone several reviews. These reviews are conducted to ensure the compliance and relevance to the development of science, regulation of the university and professional associations, the suggestion from alumni and stakeholders, and job market requirement. The process of achieving the expected qualification profile is carried out through the main program lecture activities with a minimum number of 146 credits equivalent to 233.6 ECTS. Learning activities can be completed within eight semesters but no more than 14 semesters. Curriculum structure of Animal Husbandry study program consists of 5 groups of course (Group of General Courses or MKU, University and Faculty characteristic courses, Study Program features consist of Compulsory Courses and Elective Courses) and MBKM that must be completed during a minimum study period of 8 (eight) semesters and a maximum of 14 (fourteen) semesters with a credit unit range of 146 credits.

| Courses | Total (in Credits) | Percentage (%) | Total (in ECTS) |
|---|---|---|---|
| General Competencies (Common Courses)/ University and Faculty Courses | 10 | 6.85 | 16.0 |
| Fundamental Courses (Basic Courses)/ Field of Study Knowledge | 13 | 8.90 | 20.8 |
| Academic Core Courses (Program Core Courses) | 104 | 71.23 | 169.2 |
| Electives/Enrichment Courses (Enrichment Course)/Off-Campus Credit Transfer (MBKM) | 10 | 6.85 | 16.0 |
| General Competencies (Common Courses)/ University and Faculty Courses | 3 | 2.05 | 4.8 |
| Final Project | 6 | 4.11 | 13.1 |
| **Total** | **146** | **100** | **239.9** |

As mentioned previously, to earn a B.Sc. degree in Animal Husbandry, a candidate must pass at least 146 credit hours, consisting of compulsory and elective courses, as well as a final project (Thesis or Skripsi in Bahasa Indonesia) based on research in Animal Husbandry.

The course distribution is hierarchically arranged, which illustrates that the courses of the semester above are an extension of courses from the previous semester. The distribution is based on the relationship between concepts, levels of knowledge, and course mapping that some of the upper semester courses have the preconditions in the previous semester. B.Sc. guarantees a balance between courses offered by the study program. The 8th-semester students no longer take theoretical courses but take thesis for six months. For this reason, students are expected to complete their degree in the 8th-semester.

The curriculum is developed through a series of processes from the body of knowledge up to curriculum structure (Table 4). The curriculum structure will guide students to achieve competencies that have been set and meet the PLO of Animal Husbandry Program. Intended competencies that students can acquire after taking one course can be seen from the course module. Courses are designed from the core subject matter.

Table, Body of knowledge in Animal Husbandry Study Program

| Code | Subject matter | Description | Course |
|---|---|---|---|
| SM1 | General Basic sciences with university specification | Includes knowledge of basic knowledge for the formation of attitudes and knowledge of various island dryland cultures developed in NTT and anti-corruption education. | 1. Religion<br>2. Pancasila<br>3. Citizenship<br>4. Bahasa Indonesia<br>5. English<br>6. Anti-corruption education<br>7. Drylands livestock system |
| SM2 | Basic sciences in Animal Husbandry | Covers basic knowledge and general skills in animal husbandry. | 1. Mathematics<br>2. Biology<br>3. Chemistry<br>4. Biochemistry<br>5. Introduction to Animal Science<br>6. Statistics<br>7. General economics<br>8. |
| SM3 | Nutrition and feed knowledge and technology | Covers the science of the nutritional requirements of all types of livestock at each growth period | 1. Feed crop science<br>2. Animal nutrition science<br>3. Ruminant nutrition<br>4. Poultry and non-ruminant nutrition |

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| | | and their physiological status. | 5. |
| SM4 | Knowledge and technology production | Covers the science of production in various types of livestock | 1. Livestock breeding<br>2. Poultry production<br>3. Beef production dairy production |
| SM5 | Reproduction and Breeding knowledge and technology | Covers the science of reproduction, breeding, and fecundity of various livestock | 1. Animal physiology<br>2. Animal anatomy and Histology<br>3. Livestock reproduction science<br>4. Biotechnology<br>5. |
| SM6 | Animal products knowledge and technology | Covers the science of processing the results of various types of livestock products | 1. |
| SM7 | Livestock socioeconomics knowledge | Covers the science of livestock business development from upstream to downstream | |
| SM8 | Big data literacy | Covers the science of business management of various livestock commodities as well as methodology and experimental design | |

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| SM9 | Livestock climate change mitigation | Covers the science of livestock's relationship with their environment and risk reduction. | |
| SM10 | Nutrition and Feed Technology Applications | Includes knowledge of feed cultivation, preparing rations from local feed ingredients, feed processing and feed industry development. | 1. Feed industry technology and process |
| SM11 | Production technology applications | Covers the field of business development science of all livestock species that can be developed in a region. | |
| SM12 | Reproduction and Breeding technology applications | Includes the application of the science of reproduction, breeding, and fecundity of various livestock that can be developed in a region. | |

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| SM13 | Application of livestock product technology | Covers the science of processing various primary livestock products. | |
| SM14 | Application of socio-economic knowledge in livestock business | Covers the application of knowledge on livestock business development from upstream to downstream. | 1. Livestock entrepreneurship<br>2. |
| SM15 | Final Project | Covers areas of interest and study including: PKL, KKN, seminar, thesis | Field practice, pre-thesis seminar, community service project, thesis, |