Module designation	Feed Fabrication
Semester(s) in which the module is taught	Even semester
Person responsible for the module	Prof. Dr. Ir. Ali Agus, DAA., DEA., IPU., ASEAN Eng. Ir. Andriyani Astuti, S.Pt., M.Sc., Ph.D., IPM. Ir. Cuk Tri Noviandi, S.Pt., M.Anim.St., Ph.D., IPM., ASEAN Eng.
Language	Bahasa and English
Relation to curriculum	Specialization's Elective
Teaching methods	Classical lecture, discussion and lab works.
Workload (incl. contact hours, self-study hours)	Total workload: 82 hours Contact hours: - Lecture: 12 hours - Academic activity: 14 hours - Practicum: 42 hours Private study: 14 hours
Credit points	1/1
Required and recommended prerequisites for joining the module	None
Module objectives/intended learning outcomes	Course Outcomes (CO): 1. Students understand definition, basic principles in feed grinding, determine the grinding categories (fine, medium, coarse). In addition, students are expected to understand the principles in processing liquid and solid feed into finished feed. 2. Students are capable in designing environmental-friendly feed mill and its storing system. Furthermore, students are able to define grinding products, and homogenous mixing products. 3. Students master the aspects related to feed fabrication (equipment), taking the raw material, finished feed processing, and storage; able to compete or work interdisciplinary in relation to processing, finished feed production and concentrated feed storage; and then, able to communicate their ideas and opinion, especially related to feed fabrication. Expected Learning Outcomes: - Attitudes and Behaviors: 1. Be accountable in carrying the professional practice that includes ability to accept accountability towards decision and professional action. It shall be according to the scope of the practice under their responsibility and laws. (CO1, CO2, CO3) - Mastery in Sciences: 1. Able to master the current animal science and its application theory. (CO1) 2. Able to master the livestock production science, animal nutrition and fed science, animal products technology, and the livestock social economics in relation to food security and environment. (CO1) - Special skills: 1. Able to make innovation in the animal husbandry based on the development of science and technology. (CO2)

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<tr><td></td><td>2. Able to solve problems and anticipate issues in the development of animal science and industry. (CO2)
- General skills:
1. Able to make a decision in the context of solving problems in the development of science and technology, which pays attention and applies humanity values based on analysis study or experiment towards information and data. (CO2)
2. Able to communicate spoken and written English effectively by using the information technology for the development of animal science and its implementation. (CO3)</td></tr>
<tr><td>Content</td><td>Indonesia is a tropical land with two seasons in a year: rainy and dry season. This occurrence causes fluctuation in the supply of feed. On the rainy season, there are huge numbers of crops harvested, but on dry season very limited harvest is available. And again, this still depends on the length the dry season. The supply of concentrated feedstuffs sourced from grains and crops by-products highly depends on harvest. The supply is abundant in the harvest season, but far less available on the post-harvest and ruing the seeding season.
The Feed Fabrication course is designed to provide students with some competencies in feed fabrication technology, design environmental-friendly feed mill, and process feedstuffs into finished feed product. For the above purposes, students are provided with methods in choosing grinder, mixer, and storing method both for feedstuffs and finished feed product. In addition to theory, students also practice to produce concentrated feed that will include grinding and mixing process.</td></tr>
<tr><td>Exams and assessment formats</td><td>
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<tr><th>Assessment Components</th><th>Course Outcomes (CO)</th><th>Percentage (%)</th></tr>
<tr><td>1. Midterm exam (written test, take home exam, paper assignment)</td><td>CO1, CO2 & CO3</td><td>35</td></tr>
<tr><td>2. Final exam (written test, take home exam, paper assignment)</td><td>CO1, CO2 & CO3</td><td>35</td></tr>
<tr><td>3. Practicum</td><td>CO1, CO2 & CO3</td><td>30</td></tr>
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<tr><th colspan="4">Grade and Score</th></tr>
<tr><th>Grade</th><th>Score</th><th>Grade</th><th>Score</th></tr>
<tr><td>A</td><td>≥80</td><td>C+</td><td>45-49,9</td></tr>
<tr><td>A-</td><td>75-79,9</td><td>C</td><td>40-44,9</td></tr>
<tr><td>A/B</td><td>70-74,9</td><td>C-</td><td>35-39,9</td></tr>
<tr><td>B+</td><td>65-69,9</td><td>C/D</td><td>30-34,9</td></tr>
<tr><td>B</td><td>60-64,9</td><td>D+</td><td>25-29,9</td></tr>
<tr><td>B-</td><td>55-59,9</td><td>D</td><td>20-24,9</td></tr>
<tr><td>B/C</td><td>50-54,9</td><td>E</td><td>0-19,9</td></tr>
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Study and examination requirements	The final grade in the module is composed of 35% performance on Midterm exam, 35% final exam, 30% practicum. Students must have a final grade of 70% or higher to pass.
Reading list	- American Feed Industry Association. 1985. Feed Manufacturing Technology III. R.R. McEllhiney (ed.), 1701 North Fort Myer Drive, Alington, Virginia USA 22209. - American Soybean Association. 2000. Feed Technology and Nutrition Workshop. R.A - Cullison, A.E and R.S. Lowrey. 1987. Feeds and Feeding. 4th ed. A Reston Book. Prentice Hall, Englewood Cliffs, New Jersey. - Ensminger M.E. and C.G. Oletine. 1978. Feeds and Nutrition : Complete. First Edition The Ensminger Publishing Company, 3699 East Sierra Avenue, Clovis, California 93612.